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VOL. XIV.

JULY, 1877. ✓

NO. 7.

THE  
**MARYLAND FARMER:**

A  
MONTHLY MAGAZINE:

DEVOTED TO

Agriculture, Horticulture and Rural Economy.

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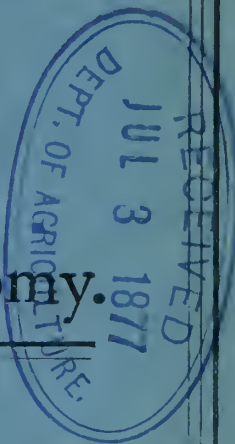
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# THE MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

Vol. XIV.

BALTIMORE, JULY, 1877.

No. 7

*For the Maryland Farmer.*

## SCIENCE AND AGRICULTURE.

D. DULANY WORTHINGTON, B. A.

### PAPER II.

Among the sciences which partake most of the character of advancing, material civilization of the nineteenth century, *chemistry* holds the first rank.

One of its special duties is to discover hidden properties and uses in things—to lay open the unsuspected riches of kingdoms. It also suggests and presides over all those new and growing arts by which wealth and power are conferred upon the countries that foster them.

The progress of Chemistry during the present century may, for convenience, be divided into two epochs: During the first thirty years the *mineral* or *inorganic* branch of the science received the principal attention of chemists; during the latter fifty years the chemistry of the *carbon compounds*—the so-called *organic* chemistry—has been attracting the attention of the larger number of investigators. The advance which the science has made in this comparatively short time is almost miraculous.

The newest text-books are always behind the actual state of the science.

They, too, who only read or teach from such books must, therefore, be behind. Hence the necessity of purchasing new works almost monthly,—of hard and continued study, in order to keep up to the times—of the regular perusal of the scientific journals, and of the personal prosecution of laboratory work.

Our readers are aware that botany, physiology, geology and meteorology, all lay claim to the honor of having greatly benefitted general husbandry.

But of late years chemistry has taken the lead in explaining the processes, and illustrating the principles on which the practice of agriculture depends.

The money value of science to general husbandry, is not generally acknowledged.

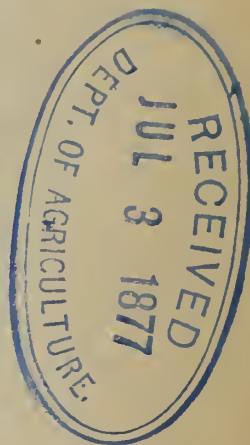
When, in 1840, the popular work of Liebig drew the attention of practical men to the relations of chemistry to agriculture, their minds became suddenly filled with great expectations of some immediate good to be desired from that relationship. When a few years had passed and those extravagant hopes were not realized, a great reaction set in, and were declared Liebig's experiments\* signal failures. The real truth of the matter is that a great deal had been done and was doing.

Liebig lived down to a time when the ideas of the New Chemistry had become fully developed, as now received, and had been adopted by the majority of thinkers; he personally contributed, in no small degree, to the realization of the great revolution. Liebig was almost the father of modern chemical views, applied to vegetable physiology. His work upon vegetable physiology is, perhaps more widely known and appreciated than any other of his labors.

The earlier physiologists considered that the vital force was the chief agent in the assimilation of the constituents of plant growth. The whole subject of plant growth—its chemical aspects was shrouded in the deepest ignorance.

As late as 1819, the Academy at Amsterdam offered a prize for the scientific solution of the question: "Whether potash, occurring in the ashes of plants, was actually produced during the combustion?"

The researches of Saussure, the French physiologist, lead to the result that the mineral constituents of the plant come from the soil; this of itself was a great advance. As to the organic part of the plant, the opinion was long held that it was entirely derived from the decomposition of humus or mold by some vital force.





Saussure gave a truer view of the matter by saying that the carbon comes from the atmosphere, but he still clung to the old ideas of regarding humus as an essential part of plant food; these views were shared by all prominent chemists of the day.

The value of the device of adding *inorganic* material to the soil, to increase plant growth, was recognized, but only in a slight degree. Under this state of the science of physiological chemistry, in 1840, appeared Liebig's great work on "Organic Chemistry, in its Applications to Agriculture and Physiology." The book was entirely revolutionary in its tendency, for it broke with the past and established the doctrine concerning humus. It taught that the first sources of nutriment of plants are inorganic in their nature; carbon from the air, water and soil; sulphur from the sulphuric acid in the soil; oxygen from the atmosphere, and phosphorus from the soil; that every constituent occurring, in no matter how small a quantity, is essential to the growth and development of the plant.

He showed that humus entirely loses its solubility in water, when it becomes dry or frozen, and that it cannot be retained in solution by the alkalies present in the soil, because they exist there in far too small a quantity in comparison with the amount of carbon in the grown plant; also, from the slight solubility of the humates, not sufficient water could have access to the soil to bring enough of humus into solution. He pointed out how animal and vegetable life respectively produce and decompose carbon dioxide, and this as an essential to all organic life; thus he fully established the theory of the circulation of carbon in nature.

Liebig admitted the proper function of humus in furnishing by its *oxidation* carbon dioxide, the only form in which carbon could become assimilated. The doctrine relating to the assimilation of nitrogen in the formation of the nitrogenous parts of plants, such as gluten, albumen, and the organic bases, was entirely original with Liebig; his idea was that the ammonia, nitric and nitrous acids of rain water, furnished the nitrogen necessary for vegetable growth. This he proved by germinating seeds in earth which had been calcined in order to get rid of all nitrogenous matter, the ashes of peat being added in order to give the necessary mineral constituents. Liebig showed conclusively that carbon dioxide, water, and ammonia contained in their elements all the constituents necessary for organic growth. He held that sulphur occurred in the soil, in the form of sulphuric acid, and that before assimilation it was deprived of its oxygen, and united with hydrogen and nitrogen; and that phosphoric acid is derived from the mineral matter of the earth, from phosphates, and not obtained as a constituent of organic matter.

Of course many of these views are to be modified greatly. For instance, it is perfectly well known now, that phosphorus forms an integral part (not as phosphoric acid) of the brain and nerve matter. Saussure had already shown the constancy of the occurrence of the same chemical elements in the ashes of plants, and pointed out that the small quantity in which some were present was no proof of their uselessness; this idea Liebig confirmed and made plain, by numerous accurate analyses, and the logical conclusions drawn therefrom. The new ideas began to bear fruit; many new facts were discovered. Grass required silica and potash; volcanic rocks by disintegration form a soil where grass grows well; when primeval forest is burned the soil is very productive for several years without any manure, as all tobacco growers well know. When soils become exhausted by frequent crops, it is very obvious that the lost mineral matter carried away with the plant could be replaced artificially. This was the origin of the system of artificial fertilizers and super-phosphates which is now of such great importance to agriculture. As regards guanos and similar fertilizing substances, the services of analytical chemistry to agriculture, are pretty well acknowledged. It is this branch of science which has established manufactories of artificial manures all over the country; it is by its aid alone that the absolute and comparative worth—the real money value of the products of these manufactories—can be ascertained.

Every one well acquainted with the history of agriculture, is aware of the immense sums which are annually spent in the purchase of lime, and of the numerous misapplications of it which are constantly made. Hence the different opinions entertained concerning the purposes which lime serves in the land; the frequency with which it should be repeated, &c. Some of the greatest mistakes in the use of lime appear to have arisen from supposing that it acts primarily as a manure, properly so-called, and that it is capable of taking the place of a manure. The farmer speaks of liming or manuring his land, as if they were really one thing. Gypsum, by reason of the uncertainty of its mode of action, must continue to be employed empirically until it is better understood. A writer on husbandry says on this point, "There has as yet been found no law by which to govern its application: on one field it succeeds; on another, to all appearance precisely the same, it fails; at one time it would seem as if its efficacy depended upon showers following closely upon its application; in other seasons, showers lose their effect. In one



locality a few bushels to the acre work strange improvements, and in another, *fifty* bushels work no change whatever. Now it is a hill pasture that delights in it, and again it is an alluvial meadow."

In Liebig's work on *The Natural Laws of Husbandry*, we read that "the whole matter is still involved in doubt." He states this after having first given an opinion respecting its mode of action.

The heaps of animal excrement which lie about the barn yards of farmers, possess specific fertilizing influence upon plants; and were it furnished in sufficient quantities to replace the elements removed from soils in repeated croppings, the labors of chemists in the direction of seeking out new supplies of plant food would be practically useless. But this is not the case, hence it was natural that the scientist was called upon to investigate the chemical nature of that material, which common observation had taught to possess the natural food of plants. The use of barn-yard manure too has a decided disadvantage when there is much handling to do, inasmuch as it contains a great deal of perfectly worthless material. An analysis of ordinary barn-yard manure will show the presence of the following valuable elements: nitrogen, potash, magnesia and phosphoric acid. Assuming that a cord of this manure will weigh three thousand pounds, there is contained in it of water, about two thousand four hundred and fifty-six pounds; common sand, one hundred and thirty-eight pounds. Here is at once two thousand five hundred and ninety-four pounds of worthless substances. Now subtract the carbonaceous matter, say about three hundred and thirty-two pounds, which is as valueless as so much chaff; we have left, only about seventy-four pounds of active fertilizing material which has a money value.

These heavy one and a-half tons the farmer hauls to his fields in four-horse wagons; whereas seventy-four pounds of mineral salts might be taken in bushel baskets, and carried upon the shoulder. In theory, therefore, the artificial fertilizer would seem to be better in every respect; it certainly is far cheaper if manure has to be carted any great distance. But experience teaches, in spite of our scientific theories, that the same salts and the same organic matter as found in the dung-heap, have a higher money value, and exert a more specific influence upon plants, than when presented in artificial mixtures.

We are, as yet, incapable of explaining this.

The impression that chemists underrate barn-yard manure, is a wrong one.]

We propose, in another article, to speak at some length on the subject of the so-called "special" or "chemical" fertilizers. The manufacture of such fertilizers has now become an immense business, there being about five millions of capital invested in it in this city alone.

The mode of reading analyses and the valuation of fertilizers would doubtless form a not uninteresting chapter to the practical farmer.

—\* An account of Liebig's experiments, made near Giessen, was given in our last paper.

### About Clover Seed.

Some of the papers are discussing the question whether clover produces seeds on the *roots*.

To prove that clover does produce seed on the roots, in the shape of small vital tubers, the advocates instance potatoes and artichokes, both of which produce seeds from blossoms above ground and on tubers in the ground; but this is not analogous to clover. If any one can say that he ever found a second or third stalk of red clover come up any distance from the first stalk on the same root; or if he has planted a swelled portion of the clover root, separately, and obtained a separate plant; if either of those conditions have absolutely been found, then one may conclude that, possibly, red clover *does* produce seed on the roots below ground, as well as in the blossoms above. We never saw such an instance, in over 40 years experience with clover, as two stalks growing from one seed; we have seen it tiller-out, above ground, much like the stools of timothy or rye.

White clover roots make little tuberous chains, under ground, as well as running vines or stalks above, which seem to propagate new plants, or afford seed, besides the flower seeds.

But, it is an interesting question, a curious subject, and is worth the attention and observation of farmers; it will cost very little—almost nothing—to test and settle the question, whether red clover does produce seed under ground; a few plants in the garden will do it.

The following which we find floating about in our exchanges is valuable and of much importance to farmers as an evidence of the *nitrogenous* value to the clover plant to plow under as a manure:

CLOVER.—"Clover is a practical creator of nitrogen in the soil. It is also a purveyor of potash and phosphoric acid. According to experiments made in Germany, the clover of an acre leaves nitrogen enough for 116 bushels of wheat, phosphoric acid enough for 114 bushels, and potash enough for 78 bushels, and all in the very best possible conditions."





### FARM WORK FOR JULY.

This number of the MARYLAND FARMER will reach most of our readers in the midst of their harvest, which, from the accounts we have, will be, we are pleased to hear, gratifying to our farmer friends, and likely to bring a remunerative price for the fruits of this toil. The wheat crop has of late years been a failure to a great extent and prices have ruled low; we not only hope, but believe that the present year will prove a remarkable exception.

In securing the harvest, it should be the aim because most economical, to get through as speedily as possible by having a large force, so as to cut, bind, shock or stack the grain unbound, as most persons do oats, all in one day. Have the scattered wheat stalks raked immediately the shocks are put up, and haul as fast as raked up to the barn to be thrashed out at once.

Do not let the wheat stand long in the field, to be depredated upon or be ruined by rain, as has been too often the bad management of farmers, by which millions of dollars some seasons have been lost by this wilful neglect and indifference. Haul to the barn and thrash and put the grain in the granary to be safe and ready for market when a convenient opportunity to ship it occurs or to await a favorable rise in price. If a farmer owns or hires a machine which cleans as it threshes, it is more expeditious to thrash in the field. Whenever done, see that the straw be carefully ricked, and after it settles, return to it and rake down the sides straight as a house side, and throw, what is raked off, on the top, making the top like that of a high pitched roof. The straw will then keep for years, bright and sweet, and be relished by the stock as food or make cleaner and pleasanter bedding for all animals. If near market, such straw will pay well to sell. Rye straw if tied in *bundles* will sell for more than the grain it produced, as a usual thing. Nicely preserved oat straw *baled*, is worth nearly as much in town as timothy, and more than common course hay. Wheat straw clean and bright will bring \$6 a ton when clover hay will bring \$10, or Timothy \$12 or \$14—and so on in proportion to the price of hay of good quality.

As harvest calls for hard labor and enervating because of the heat, the harvesters should be well fed, with a good lunch between breakfast and dinner, and be supplied with plenty of cool refreshing drink, but not intoxicating drink; coffee hot or molasses, ginger and water are excellent; [better than all is good butter-milk]. Ice-water should not be allowed in the field; it is too dangerous to over-heated systems. Let the water be brought often from a cool spring or pump. Whiskey and ice water have killed many a man whose industry had heated his blood to a boiling pitch, and then took whiskey and an over quantity of ice cold water. It is enough to burst an iron boiler when it is red hot.

### CORN.

Do not let the corn crop suffer for work, which it will do, if not cultivated with the shovel plow or cultivated at least once in eight days. The drier the season, the most stirring of the soil is required. As soon as it is breast high and has been well worked, stop further work, and leave it to itself with a broad casting of one or two bushels of plaster per acre.

### TOBACCO.

We hope every planter has pitched his crop and wed it out, and "budded" such plant with plaster. Now, look out for the first glut of worms. Begin early destroying the Horn-blower—destroy all eggs on the young plants, and every villianous little worm that appears on the plants. Let every planter, large and small, do this and the second "glut" will not be many and the more easily destroyed. By such annual war on the first army of worms that appear and persistent destruction of horn-blowers, the worm will no longer be the dread of the planter.

The plant being small, with few and little leaves, it can be more thoroughly examined, than when the plant is half or wholly grown, and a woman or child can go over twice as many plants, and do the work more effectually in a day, than an active man can accomplish in the same time when the tobacco is large and worms large and plenty.—This is admitted by every man who has ever cultivated this crop. Besides the holes, made by the worms in the leaf at this early stage of the plant, will grow up, but never do so after the plant and leaf are large. Its raggedness at that stage will never be mended by nature.

The Connecticut and Pennsylvania planters who make such heavy crops and get such high prices, attend closely to the destruction of the worms and eggs on the young plants. They hire women and children for this work while the stronger hands are



employed otherwise. They see their advantage in this outlay for cheap labor. Turkeys and other poultry are invaluable at this stage of the tobacco growth. They are of not much use in full grown tobacco.

#### POTATOES.

The late crop of potatoes should have been up and growing some weeks since, but it is not yet too late to plant and make a good crop, if a good kind is selected and planted on rich well prepared land. Should the vile Colorado locust or potato bug appear, make short work with them by a full and frequent use of Paris Green. As we suggested this time last year, we repeat now, that the safest and most expeditious way to use this poison is to procure one of the implements, now in general use, manufactured for the purpose. Among these, are Allen's bellows Bug Exterminator, for spreading the Paris Green in a dry state, and others for the like purpose; and we have Peck's Liquid Atomizer, for distributing it in a liquid state, and other substances in liquid form, to cleanse plants from various insects, such as carbolic acid, tobacco soap, gas tar water, salt water, &c.

#### TOBACCO SOAP.

We would call special attention to tobacco soap as a cheap, almost new compound, that is very beneficial to plants, and animals attacked by insects and is valuable about the house to drive off ants, roaches, bed-bugs, and to clean painted wood, &c. We have fully tested it and know whereof we speak. It should be in every household. It costs a few cents per pound more than common rosin soap. The cost of the Paris Green distributing machines varies from \$3 to \$15.

#### MEADOWS AND HAY CROP.

We presume the clover hay has been made and secured. The meadows will soon be fit for the mower. Cut all grasses for hay before the most of the plants are out of blossom and before the seeds ripen. As soon as the hay is removed from clover or other grass lands, sow over each acre two bushels of plaster, and if you possibly can, three or four bushels of refuse or ground alum salt. Keep off all stock until the after-math gets six inches high at the least, and you will probably, we may say surely, unless the season be unusually dry, have a fine pasture from September to the middle of November, eight or ten weeks.

#### STOCK.

*Cattle and Horses.*—These should have good pasture, pure water, salt and shade.

*Sheep.*—They suffer much, if fat, with heat and should be kept as quiet as possible, with plenty of shade, and salt in troughs smeared with tar often, so that as they lick the salt, they will get also a little

tar which is healthy for them, and their noses will be touched with the tar, and thus that species of bee which this, and next month, will lay its eggs in the nostrils of sheep and in a few months or sooner, hatch and often produce death from maggots in the nose and head; Carolina tar is an effectual remedy. If the lambs appear to have many ticks or other vermin, which is likely, as all such insects leave the old sheep after they are sheared, and go to the lambs for the protection of their longer wool; dip them some bright day in a strong steep of trash tobacco and warm water with a little sulphur and carbolic soap. Do not let it get in the eyes, ears or mouth of the lambs. One minute in the steep or decoction is enough. Then stand the lamb in another box or tub to drain off the liquid, and turn it out on a green sward. This is very beneficial to the health and affords great comfort to the animal. It is inconceivable how worrying these insecta are to such sensitive, nervous yet uncomplaining creatures as sheep. Many a lamb has ceased to grow, and become poor and sickly from unabated annoyance of these nasty little scourgers.

*Hogs.*—It is important this year that you should raise all the meat you can, especially hog meat, as in all probability pork and bacon will command an extra high price next year, owing to great exportation which is on the increase monthly, war or no war, in Europe. Let your hogs have all the grass they can eat, such fruit and vegetables as can be spared, and a little grain once or twice a day. Sows nursing pigs should have slops or swill, and the pigs be given all the extra milk and dairy slops, thickened with a little meal, in a trough to themselves.

#### CORN AND PORK.

There have been many careful tests made to ascertain how much pork a bushel of corn will make. It has been well settled that 8½ lbs. of pork as an average, can be made by a bushel of corn judiciously and carefully fed to a hog of the improved breeds. Some few will not give that quantity, and many will yield 10 lbs per bushel. Common inferior breeds will not give 4 lbs., and perhaps less, in the usual mode pursued in feeding, in dirt, and the animals exposed to all weather, without shelter and beds and other appliances for healthy growth and taking on fat. It is a wonder how they fatten at all, under some treatment they have to endure. Hence such slipshod farmers say pork costs more than it is worth. They are right, for a bushel of corn will not produce for *them* two pounds of pork. But from this statement the considerate farmer can calculate what his corn will



net in the market, after paying for hauling, transportation, commissions, &c., and what his pork will bring him, besides the manure, and the offal from killing his pork, which it must be borne in mind is considerable.

#### ROOT CROPS.

Keep the beets, mangolds, carrots, and ruta бага crops growing, by often stirring the ground with the hoe or cultivator. Let no grass or weeds grow or be seen in the root patch. It is late, but not too late, to sow the Hybrid turnips, such as early Aberdeen, Dale's Hybrid, &c. The land must be finely comminuted and very rich. Sow in drills 30 or 36 inches apart, and the plants thinned to 6 inches apart. All these different roots can now be transplanted as they are thinned, if the ground be wet and there is a moist, cloudy spell—what might be called a good tobacco planting season.

#### BUCKWHEAT AND MILLET.

It is a good time to sow these seeds, either for seed, hay or to be turned under as green manuring for wheat or rye.

*For the Maryland Farmer.*

#### Curled Bark on Trees.

*Messrs. Editors:*—In compliance with your request, desiring information on the subject of a remedy for "*curled bark*," with which the apple trees of your correspondent, of Frederick City, Md., are said to be suffering, we have to say:

The disease is new to us; unless he alludes to the natural curling of the surface or outer bark, (which is not a disease.) This curling of scaly outer bark or *cortex*, is natural, and so common with apple trees, in thrifty growth, that no importance is attached to it, unless, as a proof of the vigor of the trees.

A disturbance of the *cambrium*, however, between the bark and wood is, of course, dangerous. The correspondent does not tell us especially how his trees are affected. *The apple bark beetle*, (*Tomicus mali*) described by Fitch, is a small, smooth, black or chesnut-red beetle; the larvae feed under the bark, and then enter the wood and are destructive to trees.

The appliances you have suggested are the very best, not only to aid nature in ridding the trunks of trees of loose bark, (the shelter of insects), but for the general health of the trees. And, if the "*curled bark*," described by this correspondent, is really a disease, no treatment, we think, would be better than that you have recommended.

We are not in favor of "driving nails into the trunks of trees." If this is for *giving iron*, it can be done in a different way. If for the purpose of retarding the circulation of the sap, to induce fruiting, it might be injurious in the long run. Small nails are useful, if not driven deep, in the trunks of trees exposed to the nibbing of animals, especially hogs; and no other animals should have the range of the orchard. The outward ends or points are left from one-fourth to half an inch long and sharpened. This affords too much *scratch* for the rooters, as well as cattle. The rubbing of trees by stock is very injurious.

You also allude to *mulching*.—This is very beneficial for all fruit trees—especially for those newly set. In our practice, we divide the mulch and apply one half in the spring and the balance in early summer; in all, three or four inches deep. This modifies the too sudden change of the temperature of the soil, and is in place when most needed. Evergreens, especially the pines, are greatly benefitted by *mulching* in this way, with *old pine sawdust*. For other trees, any well rotted sawdust will afford a good mulch, but when sawdust is used for these we prefer that of the oaks or other hard wood.

J. FITZ.

*Keswick Depot, Albemarle Co., Va.*

NOTE.—We have frequently, in early life and since, seen unhealthy peach trees restored to vigor; have seen the Bartlett and other pear trees which cracked the fruit; apple trees and others where foliage was turning yellow; all of these and other difficulties, with fruit and fruit trees, we have often seen speedily cured and removed by driving nails into the trunks of the trees, clear up to the heads, so that the bark grew over them the first season. The object is to supply oxyd of iron to the sap, to be carried throughout the tree, and effects the object and remedy much quicker than by burying iron among the roots.—[Editors of Md. Farmer.]

"That's the smallest horse I ever saw," said a countryman on viewing a Shetland pony. "Indade," now, replied his Irish companion, "but I've seen one as small as two of him."

Two-thirds of the willow wood for the manufacture of willow-ware in this country, is imported from Europe, at a cost of \$5,000,000 a year. This sum might be kept in the country.

CLINKERS IN STOVES.—A correspondent asks how to remove clinkers from a stove. Make up a good fire; then place a dozen oyster or clam shells or small lumps of lime on the fire, pressing them into contact with the clinkers; then let the fire burn down and the clinkers will be found so soft that they can be scraped off with a shovel.



## GARDEN WORK.



## GARDEN WORK FOR JULY.

But little planting is required and not much seed sowing, this month in the garden, beyond planting out cabbages, beets, celery and some sweet corn for autumn and for winter uses. A few rows of beans and peas should be sown for a succession of these crops. Endive, spinach and some small salading and Chinese radish may be sown at intervals.

*Pickling articles.*—Sow cucumbers, gherkin and canteloupe seeds for pickles, and see that the pepper plants are well attended to, for the same purpose. In pulling up and curing your onions, select all the smallest for pickles.

Keep the garden clean of all grass and weeds and the growing crops often worked with hoe or rake to keep the ground loose and light.

*Strawberries.*—Cultivate between the plants, and work up the alleys,—keep down all runners, except such as you desire to propagate. These may now be grown in pots, 2 inch pots or 3 inch pots, filled with rich, light soil, and sunk below the joint where it begins to root; as soon as one or more joints on a runner has rooted in the pots, cut off the runner, and after the young plants are well set in the pots, cut them apart, and as soon as they fill the pots, or nearly so, with roots, set them in moist weather or after a rain in beds, well manured and prepared, sixteen inches apart in rows two feet apart. Keep clean from grass and weeds, water in a dry spell, mulch heavily when the ground freezes, and you may calculate next summer upon a fine crop from plants thus treated, thereby you will gain one year.

*Celery.*—Do not fail to plant largely of this delicious luxury and medicinal plant. People with palpitation of the heart and nervous people should eat heartily of it every day, if they desire to be cured by the use of the most palatable medicine ever man or woman had to take.

*Tomato.*—We again repeat, plant tomato—too many you cannot have. They are relished by fowl and brute, and man enjoys them in every way that they are used. They are nice any way, raw or cooked, preserved, canned, pickled, green or ripe; baked, boiled, stewed, fried or broiled; in soup or with meats or in any form or shape, at any and all times. In connection with this *love-apple*, we would call attention to what seems well authenticated, and which we find in some of our exchanges, and which, if true, is a valuable discovery. We, ourselves, have never tried it, but it is so simple, we recommend our horticulturists to test it, and let the public have their experience through the columns of the Maryland Farmer—It is:

*Important Virtue of Tomato Leaves.*—From South America comes a statement that a fruit grower accidentally found that tomato leaves possessed the remarkable virtue of driving off the curculio and other noxious insects from fruit-trees and garden plants and flowers. He one day cut down some tomato vines and put them as a mulch around some peach trees, the fruit of which was being destroyed by the curculio. He soon discovered that the curculio abandoned each tree about which the tomato vines were spread. Following up this supposed accidental discovery, he found that a free use of the tomato plant near his trees proved an effective protection against the curculio and other destructive enemies of fruits. It is further said by good authority that some gardeners in this country have tried this remedy, some by accident and some by intention, and with perfectly satisfactory results. Some specific cases are given corroboratory of the efficacy and truth of this discovery. If it should only prove to be reliable, what a blessing this already popular vegetable will prove to be. Why, we shall have the nectarine and plum and apricot in abundance if the simple tomato vine can perform this wonder. It is so easily tried, let us all make sundry experiments. If such be the case, we could all raise the broad leaved, new variety of tomato in hot beds, and steep the leaves and use the infusion on all our early fruits that are now almost every year entirely destroyed by the curculio. It would save all the labor of jarring daily the apricot and plum trees, and catching these destructive curculio on sheets spread beneath the trees to catch them when fallen by the jar given the trees. The only certain, yet very expensive way, Ellwanger and Barry say that a crop of plums can with certainty be matured. Who will fail to try the experiment this year?



Accident often reveals hidden mysteries of nature, and sometimes is the incipient cause of wonderful discoveries. When experiments in such a case as this cost so very little, there is no reason why they should not be made by many, and upon a large scale. There can be no loss by planting tomatoes around about fruit trees, or trying sprinkling an infusion of tomato leaves on bushes or trees infested with noxious insects. Who knows if it is obnoxious or destructive to the curculio, it may not also be so to the phylloxera—the insect which at present seems to threaten the entire destruction of the grape in France, and thereby reduce her people to penury and deprive mankind of that pleasant beverage “that maketh the heart of man glad.”

*For the Maryland Farmer.*

### Cattle and Grass.

*Editors of Maryland Farmer:*—I find nothing in the agricultural journals that interests me more than the Reports from farmers' clubs like that of the Deer Creek Farmers' Club, of Harford county, given in your June number. It gives meagerly enough, no doubt, what was actually said on the occasion; but what we have is sufficiently suggestive, and has the value of coming fresh from the mouths of intelligent men, who give out the results of their daily observation and experience.

The question discussed in this report—“What kind of Culture and Fertilizers should land have, in order to make Grazing a specialty?”—is one which embraces the very principles of successful farming, of whatever sort. Good grazing must have good grass; and neither corn, nor wheat, nor tobacco, nor any crop known to our agriculture, but needs a soil on which grass, including clover, will grow and flourish.

Grass is the bottom fact in crop-growing and land improvement, and the treatment which will fit the land for that, fits it for other crops; and, what is more to be considered, the more we have of that and the longer we can keep it on the land the surer, the quicker, and more lasting is the improvement.

In this report Mr. Ball remarks, incidentally: Land can be improved more rapidly by grazing than in any other way. Mr. Ridout says: There is no trouble in this section about getting grass to grow, for cattle make land rich, &c. These are not statements of a new fact, but a reiteration out of the experience of these gentlemen of an old fact, that needs, now especially, to be rung in the ears of Maryland Farmers.

We have heard a thousand times that cattle-feeding has been made the basis of the land improvement of England, and the countries where the wheat product per acre more than doubles ours, and that it is thought good husbandry to feed cattle with no profit other than the value of the manure they make.

How great is our advantage, then, if we are able to find a profit in cattle and sheep and such animals as primarily need grass. Where beef and dairy products, and mutton and spring lambs are profitable, we have a reason for grass growing, apart from the steady and permanent increase of the value of our property in land, which is the sure result of systematic and extended cultivation of the grasses.

When milk is retailing in Baltimore the middle of June at ten cents a quart, and butter for forty cents a pound, we may be very sure there should be more land devoted to these products. The Deer Creek farmers, and many others have found for many years a profit in cattle feeding. Now, we have the interesting fact that very suddenly a market has opened for our fresh beef in England, and that this trade, in its very infancy, and having not yet reached our Baltimore market, has taken from New York and Philadelphia, in the past year, three millions of dollars worth of fresh beef. We know by many proofs that, notwithstanding the dogs, it is profitable to feed sheep and raise lambs.

There is one fact that every man who owns land ought, by this time, to have realized, viz: that whatever may have been done in the past, he cannot now afford to work poor land. Many do realize it, and run away from the wretchedness of such a fate. Our farms are deserted and our cities thronged with idlers. But this is not the manly way, and our true men, in the future, will be found to be those who have faced fortune on the ground their fathers left them and fought out the battle there. These will find out in time, the sooner the better, that the new condition of their affairs demand new methods of treatment; and the first step in the right way, will be not mere cropping with transient fertilizers, but the solid land improvement that comes of grass and cattle,

The manures used by the Deer Creek farmers seem to be mainly home manure, bones, and clover and plaster. Mr. Barnes uses “bone and manure.” It is not said whether the bone is ground coarse or fine, or treated with acid. Mr. Rogers has always used bone and the manure raised upon the place. Mr. Willis agrees with Mr. S. Mr. Lee, that if you get a good growth of clover and plow it in, you will get land rich—would use phosphate or lime to give the clover a start. Mr. Moore would use 500 to 600 pounds of bone to each crop. Mr. James Lee thought no fertilizer equal to clover and plaster.

It is worthy of remark, that while several members speak of the surface application of manures, no word was said of the old manner of plowing under. Mr. Bell says: put all the manure on the grass you can, no matter what age the grass is. Mr. Willis says, the best success he ever had was by sowing timothy with wheat the 20th September and top-dressing with barn yard manure. Mr. James Lee would apply on the grass all the manure made on the farm. Mr. Webster “believed that from all fine manures you had better results from applying on wheat after it is up, and harrowing it in.” He applies all rough manure on grass, and all fine manure on corn, after the first harrowing.

Respectfully,

N. B. WORTHINGTON.

NOTE.—We are glad of such a communication from so intelligent a writer, in advocacy of so important a subject; the readers of the Farmer will remember that we have often argued that *grass-growing and stock* were the sure means of making rich farms. Some have said that we almost run the subject into a hobby. All land that will bring good grass will bring good crops of grains.—[Eds. *Maryland Farmer*.]



# HORTICULTURE.

*For the Maryland Farmer.*

## Insect Enemies of the Grape Vine.

BY D. Z. EVANS, JR.

Perhaps no other fruit in our long list of cultivated ones, can compare with the grape in its freedom from the ravages of insects; and, although it is largely cultivated, its cultivation is increasing despite the fact that there are quite a variety of insects which prey on the leaf, bud, fruit, or other part or parts of the vine, and which would prove very troublesome, as well as a great loss if permitted to increase as rapidly as they are capable of doing, even under unfavorable circumstances. Although we have enough insect enemies now, yet they are yearly on the increase, both in number and kinds; many being carelessly imported from Europe in fruit seed, adhering to old sacks and in many other ways.

In some parts of the country the number of insects which are destructive to the vine are so formidable as to almost entirely veto grape growing as a business, where profit is concerned.

Some grape growers advocate killing every insect found on the grape, so as to be sure that all the enemies have perished, which is a very foolish plan, for many of the insects are useful in assisting the vineyardist in the destruction of the injurious ones. It is always best to know which insects are destructive to the grape and which are not, so as to spare the friends and destroy the foes.

Within the last few years there has been many idle and worthless remedies proposed as infallible insect exterminators, many of them advocated by persons who really have had no experience, and merely proffer their advice, based on mere supposition; and where it is thought that any method or preparation *may* result detrimentally: then do not use it. The best way to do, is to rely on the experience of thoroughly reliable vineyardists, in preference to experimenting by wholesale, though it is a very good plan to experiment with different devices, compounds and preparations, provided it be done on a small scale, for the loss, if any, will be but comparatively small.

## THE LEAF ROLLERS

are, perhaps, as troublesome and destructive to our common, out-door vines, as almost any other insect which we have to deal with; and, as they are annually increasing as well as spreading themselves westward, following close on the heels of grape culturists, we must destroy them each year as they appear, for if left for several seasons undisturbed, they would save the vineyardist the trouble of marketing many grapes.

There seems to be several species of this pest, and as they commence almost as soon as the bud has opened nicely, continuing on until the leaves drop, they will do an immense amount of damage if left unmolested for even a single season; for when attacked thus early, the leaves are drawn together at the top by strong threads of web, and, on opening this snug nest, the worm, (the most common kind, at least), which is green in color, and about half an inch in length, is found eating out the entire shoot, thus damaging the future cane almost irreparably. When the leaves are more matured, these ingenious, troublesome enemies of the grape draw the leaves together with their strong though slender silken threads, making a roll of them, and then eat up their snug nest, when they desert it and serve other leaves in the same manner.

We hand-pick these pests and destroy them at once. If they have not been left too long, they can thus be kept in check; but it requires diligence and promptness in almost all cases.

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## Maryland Horticultural Society; American Pomological Society.

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The Annual Exhibition of the Maryland State Horticultural Society will be held in Baltimore, September, 11—14, inclusive, when an ample show of flowers, fruits and vegetables is expected, and a considerable amount of money will be paid in premiums.

At the same time and place the Bi-ennial meeting and display of the American Pomological Society will take place, and a large sum in premiums will be awarded.



## MARYLAND HORTICULTURAL SOCIETY.

## JUNE EXHIBITION.

The Concert Hall of the Academy of Music presented a fine display of flowers, plants, and fruits, at the June exhibition of the Maryland Horticultural Society on the 14th. The tables were covered with specimens of variegated foliage plants, palms, ferns, cut flowers, hanging baskets, bouquets, strawberries and cherries. A basket of cut flowers by John Saul, of Washington city, had many admirers. A. Hoen and John Saul, exhibited sixty varieties of cut roses. Mr. Hoen showed splendid specimens of that rare and highly fragrant rose, the "Francis Arago," which we have never seen anywhere else; a large, dark red rose, with rich burden of perfume, a rank grower and profuse bloomer.

R. J. Halliday & Sons, made a fine show of rare plants and flowers.

Mr. R. W. L. Rasin had one of the handsomest large floral baskets we ever saw, composed of a great variety of flowers and studded over with cherries, in beautiful style.

Premiums were awarded as follows: To John Saul, best roses, twenty-four varieties, tea, 12 cut flowers; Bourdon, 12 cut flowers; 6 Noisette and 6 China; best collection cut flowers. W. H. Perot, best roses, remontant, 12 cut flowers; best 6 varieties lycopodiums; 6 distinct varieties gloxinias.—R. W. L. Rasin, best 6 specimens ornamental foliage plants; best single specimen same; best 6 variegated palms; best basket cut flowers. A. Patterson, best 6 varieties pelargoniums. James Pentland, best 12 varieties ferns; best 6 varieties fuchsias. Miss Maggie Patterson, best pair hand bouquets. Ernest Hoen, best pair of hanging baskets. J. Edward Feast, best arranged table designs. Miss Lizzie Patterson, eleven years old, best bouquet of indigenous flowers. John Cook, best collection of strawberries; best new variety same (Monarch of the West). E. L. Rogers, best collection cherries, named varieties, and best collection of any variety. Capt. C. H. Snow, received honorable mention for bloom of orchids; and W. W. Spence, special commendation for rare plants.

The attendance was very large and highly delighted with the show; this is the last till the great Exhibition in September.

## VICK FLORAL PREMIUMS.

James Vick, the distinguished florist and seedsmen, of Rochester, N. Y., with characteristic liberality, places at the disposal of the Maryland Society some \$40, to be offered in premiums for floral displays; besides chromos.

For the Maryland Farmer,

## THE CURRANT.

Farmers are very apt to give this most excellent fruit but little attention, after once "setting out the bushes" as near the fence or wall as is possible in order "to save land"; but is not the fruit of value sufficient to warrant better culture and attention?

There are several varieties of the currant, but for the general farmer the old Red Dutch and the White Dutch are the most profitable, and best suited for the average culturist; they very seldom fail of bearing some under the most adverse circumstances and always repay good attention.—They will thrive on any tolerable garden soil, and always do best where they are used best.

For general culture the bush form is the most practicable, and where fairly treated, produce better than in any other form, with ordinary treatment. If we would have nice large fruit the bushes should be well manured every fall and that manure dug into the soil about the bushes in the spring. The bushes should be kept properly thinned and all dead or very old wood cut out—thrifty bushes bear the best flavored, largest and most fruit, which supplies a vacancy supplied by no other at present in its season.

In the bush form currant roots are very apt to spread and form large clumps in the course of years; it is better to divide them after bearing a few years, resetting only the younger and smoothest growing ones, but by attention to pruning and culture, they will not need be thus treated oftener than two or three times during the natural lifetime of man. If very large choice fruit is desired in addition to the culture above directed, we must thin out the fruit soon after setting; mulch the bushes so that they will not suffer for the want of moisture, or be particular to otherwise give them water so that they will be well supplied from the first setting to full maturity of the fruit.

The uses to which the fruit may be put either green or ripe are various in the line of domestic economy. The juice of ripe currants mixed with sugar or good molasses makes one of the most refreshing drinks during the heat of haying and harvesting.

Westboro, Mass.

GIARDINIERE.

*Note.*—In years past, in New York and Michigan, we have had good results in growing the Grape White Currant; it gives large, long, rich bunches. Currant bushes like very much to have soil kept pretty moist; hence, plenty of good *mulching*, during the spring and summer are beneficial; forest leaves, half rotted straw and other litter are very good for mulch; marsh-muck mixed with old straw or hay are valuable.



### Potomac Fruit Growers.

#### JUNE MEETING.

On Tuesday, the 5th June, this Society, in connection with the Woodlawn Farmers' Club, of Virginia, enjoyed a very pleasant pic-nic excursion on board the splendid steamer "Mary Washington," down the Potomac, from Washington to Glymont and back, stopping at Mt. Vernon springs and other places. The weather was fine, and the boat in handsome order, commanded and owned by Capt. Hilman Troth; it was elegantly trimmed and festooned with evergreens and flowers. The company was large, composed of ladies, gentlemen and children; all was sober and orderly; entertainments of vocal and instrumental music and peaking were enjoyed.

Dr. E. P. Howland gave an exhibition of the Boynton swimming and life saving apparatus, by jumping into the river and swimming around, propelling himself with a paddle, as safely as in a canoe.

Among the company were Col. Pitts and family, the Kings, Kueling, Col. Daniels, Thos. H. Durand, S. Pullman and family, and many others.

The decoration of the boat was superintended by Mrs. Harriet Nute, Dr. Howland, Miss Hopkins, Col. Chase and others. There was a fine show of cherries, strawberries and flowers; a particularly attractive basket of flowers was presented by Miss Sally Pullman.

Among the newspaper reporters were Mrs. Lincoln, Mrs. Nordstrohm, Miss Hopkins, and some others; everybody seemed to enjoy themselves very happily.

In the large cabin of the boat, a meeting of the Societies was called, C. Gillingham in the chair, and Dr. Snodgrass secretary. Business being despatched, a discussion was had on the usefulness of the *Toad*, to fruit growers and gardeners, the large majority being in favor of encouraging the toad. Remarks were made on financial matters, many speaking in favor of plenty of greenbacks as a currency for general circulation, the farmers believing them to be the desirable currency, if plenty of them. Backed up by the industry and faith of the Nation, they must be perfectly safe; the Government should issue as large an amount as the business of the country demands, and will give ample security for; with specie in its vaults to redeem with when desired; these notes are as sound and secure as the Nation's bonds, which can be supplied instead when wanted. Greenbacks are cheaper and just as safe money to the people as

national bank notes, and more advantageous and economical to the Government, in that they save it largely in the expense of interest. Such are some of the views and arguments urged by the intelligent farmers.

More of these excursions are anticipated during the season; and none more pleasant are gotten up at Washington; The Mary Washington has been adopted as the fruit growers' and farmers' boat.

The award for the largest and finest strawberries on the boat, was made to John Slater & Son, subscribers to the MARYLAND FARMER, at Alexandria, Va., for the variety known as the "Monarch of the West." Several other parties showed fine specimens of this and other berries.

Next meeting to be held on July 3d.

THE POTATO BUG.—Apropos of the fact, says the *Hartford Courant*, that the potato bugs have appeared upon Black Island without perceptible means of ferriage from the main land, the *New London Telegram* says that the captain of a New London vessel reports being boarded while at sea by the genuine Colorado beetle, and that they came in such numbers as to necessitate the closing of the hatches. Those who regard this as a rather improbable story, are informed that at Millstone and other places, for some time past, the pest of the country has come in on the waves by the million. Only a few miles out of town they can be found on the shore, washed in, yet still living in such immense numbers that the stench coming from them fairly poisons the air.

THE SHEPHERD AND THE NIGHTINGALE.—"Sing, sweet nightingale," said a shepherd to the silent songstress, on a lovely evening in spring. "Ah," replied the nightingale "the frogs make such a noise that I have lost all pleasure in singing; dost thou not hear them?" "I hear them, indeed," returned the shepherd; "but thy silence is the cause of my hearing them."

DESTRUCTION OF BANKER PONIES. From a gentleman just arrived from Beaufort, who was in that city during the recent storm on the coast, we learn that over 1,200 banker ponies were swept from Shackelford's banks and swallowed up by the sea. He says some were blown off into the sea bodily. But few are now left and it is feared that the pony penning sports, so famous on Shackelford's banks in early summer, will be necessarily suspended this season.



## *Live Stock Register.*

*For the Maryland Farmer.*

### Care in Driving Horses.

BY D. Z. EVANS, JR.

Before giving our views, in brief, on the care of driving horses, we would make a statement which may not meet with the views of many farmers, but which is, nevertheless, true. We think that all farmers should keep one horse whose business it should be to do all or most of the driving done; for if kept for that purpose alone, he will always be in a condition to drive; besides, we shall always consider it injurious to use the regular work horses for driving purposes, especially during the busy season, for a half day's drive—such a drive as a regular driving horse would consider but healthy exercise, would hurt a regular farm horse far more than two day's work.

We consider it a duty a farmer owes to his work animals to keep them from the road, by having a good, gentle horse kept for this purpose.

Very often in the eve, after a hard day's work, the farmer, his wife or some of the sons, may want to take a little recreation by driving out for a few miles. When the horses have been at work all day, they must be rested, and the family must do without the much desired drive, if there is no carriage horse kept. And right here, permit me to say, that it will do your sons more good than harm to keep a nice horse for your and their use, and will do much towards keeping them from desiring a clerkship in some city store, to staying on the farm.

But it should, however, be thoroughly understood between the farmer and his boys, that the horse must have the best care and attention, that being one of the conditions on which they may use the horse.

To aid the boys a little, we will give them some valuable hints on the care of horses:

Never start out from the stable on a fast trot, but drive the horse moderately, even slowly, for the first two or three miles, especially soon after feeding, for scarcely anything injures a horse so much as fast driving on a full stomach.

In going a considerable distance, a horse can be watered while on the journey, even though he be warm, if he is kept moving immediately after he drinks, otherwise, let him cool off under a blanket before giving any food or water. If you have had some sharp driving, or have speeded your horse on

the road home, slacken up your gate when within a half mile or so of home, making him *walk* the last part of the distance, so as to cool him off. As soon as you get him to the barn, if he is warm, throw a blanket over him, ungear him quickly, put into the stall, not giving any food or water, though the horse may have his mouth sponged out, if he is very dry, and take whisks of straw and rub the animal till he is nearly or quite dry, going over the entire horse—body, limbs and all. When this is done, throw on the blanket again and leave the horse till he has cooled off, water him and then feed, if it be feeding time.

The food for a driving horse for family use, should be of cracked corn and oats, one-third of the former and two-thirds of the latter, which should be moistened with water before being fed, to prevent them from eating it too greedily. From 3 to 4 quarts of this mixture at a mess is about the right quantity, at the same time giving pure, clean and not dusty timothy hay. Clover hay will not do for a driving horse. Always water the horse *before* feeding. In cleaning, use a good curry comb, not too sharp on the edges, and a stout, stiff bristled horse brush, while a course comb and the horse brush should be used on the main and tail, though very occasionally a card can be used on the main and tail. After thoroughly cleaning the horse with these, not forgetting to give the face and head (much neglected parts) a good brushing, take a course cloth and vigorously rub the animal all over. This makes the coat soft and glossy, and removes much dust, &c. Now throw on a light blanket, put away your combs, brushes, &c., and prepare to attend to your horses feet and legs.

One of the very best things for a horse's legs is hand rubbing, which is done by gently rubbing the legs downwards, with the hands, and thus continuing till you can feel a pleasant glow in them. We have often had our pet driving horse nearly go to sleep under the operation, so well does she like it. When this is done, the foot should be turned up and the dirt cleaned out.

Care should be taken, also, to examine the fetlock joints, to see that there are no signs of "scratches." To prevent the "scratches," observe the utmost cleanliness. When they have appeared wash the affected parts well with good castile soap and warm water, then make a mixture of equal parts of fresh lard and flowers of sulphur, which should be well rubbed in. By attending to the "scratches" thus every day, they will soon disappear.



Many a farmer, as well as his sons, have found that their horses have very dry and hard feet, the frog of the foot, in some instances, being nearly as hard as the hoof itself. When horses feet are in this condition, they should not be driven till the matter is remedied; for lameness will ultimately result, if attention is not paid to it at once. The cause of the hardening of the inside of the foot is due to standing on a board or hard floor in the stall, in driving on hard roads and not caring for the feet properly when the animal is at rest. The fore-feet suffer more than the hind ones, from the fact that the hind feet are often moistened by becoming full of the dung dropped by the horse. The remedy for this is an old one, but no remedy has been found to supercede it yet, that we know of. At night, clean out the fore feet thoroughly, and then press them full of fresh cow dung; in the morning you will find the feet much better. Clean them out and then resume the application the following night. Care must be taken, however, not to keep the feet constantly filled with the fresh cow manure, or it may cause thiselo or rotting, or decaying of the frog and inner parts of foot. Some persons recommend putting a mixture of  $\frac{1}{2}$  cow manure and  $\frac{1}{2}$  clay, instead of the cow manure pure, in the feet, which in mild cases is, no doubt, the safest plan.

At some future time we may comment still further on the care of horses.

### Value of Orchard Grass.

As grass—*turf*—is the first step, the foundation of all high, successful farming, everything is important and of interest to the farmer which aids him in determining and securing the best kinds, or those best adapted to his needs and purposes.

In some localities and soils Timothy and Red Top seem to be most suitable; in others, Clover does best; and in still others Orchard and Blue Grasses are preferable.

*Orchard Grass* will withstand the effects of drouth better than Timothy or Red Top, because it takes deeper root, tillers-out more and makes more blades and top to shade its roots and the ground. For the same reasons it stands the winter better.

The following from an exchange is instructive:

ORCHARD GRASS FOR THE SOUTH.—An Atlanta, Georgia, correspondent of the *Plantation*, says of this grass: "In the catalogue of grasses, adapted to the soil and climate of the South, both for meadow and pasturage, this I regard as the most valuable for general cultivation, from the Potomac

to the Gulf of Mexico. It withstands the frosts of our most rigorous winters, and well endures the heat of our hot and frequently very dry summers, yielding a fair return for cultivation on moderately good soil, and a most abundant yield on soil well manured. It furnishes a good pasturage during the winter months, and if stock be removed from it at the proper time in spring, it yields an early and bountiful crop of hay in May or June. So acceptable is the hay to the best judge of a good article—the well fed and dainty horse—that if we place in the rack before him a mixture of clover, timothy, herds grass, blue grass and orchard grass, he will first select the stems of the latter, supposing all to have been cut at the proper stage for curing into the best forage.

"This is the *Dactylis glomerata* of botanists, the *cock's foot grass* of the English farmers; in this country generally known by the name above, because of its adaptation to shady situations. This and blue grass are especially important to us of the South, for our forests are rapidly disappearing, and we should utilize what are left to us by clearing out their undergrowth, not suffering the ax to 'hurl their oaks,' and converting them into woodland pastures, for horses, cattle, sheep and hogs.

"My opinion in favor of this grass is based upon experience and cultivation, as well as observation of its growth by others in the States of New York, Virginia, Tennessee and Georgia, and that opinion is corroborated by others. John Washington, an eminent practical farmer of Virginia, thus speaks of it: 'It will supply horses with more hay and grass in fall, winter, spring and summer, than any other grass yet introduced into Virginia. It is the only grass that grows with us the whole year round, except only when the ground is frozen. It will grow on any dry land, not excepting a *sandbank*. If you want a lot always green for an idle horse to run in, this will supply it; or green grass in winter for your dairy cow; this is the only grass that will furnish it. Try it on a sand-bank, if you can't do better.'"

HOG AND HOMINY.—Cotton is once more down to sixpence in Liverpool. Happy is the man who, warned in time, shall provide for heavy food supplies this year. Thrice blessed will he be, who calleth not on the West for corn, and heareth the grunt of his bacon. He lighteth his pipe in peace—he crosseth his legs before the fire and saith unto himself, yea, though cotton is but eight cents a pound, yet can I stare Want in the face and bid him begone. Nor shall I be a humble suppliant at the door of the banker for "accommodation," or enter therein to the chamber of despair and ruin.—*Macon Messenger*.



### VALUE OF FERTILIZERS.

We cut from an exchange the following formulas for making fertilizers, as published in Harrison Bros. circular:

As we are informed, the commercial prices of these ingredients are as follows:

Pure ground bone, \$35, per ton; Oil of Vitriol, \$2, per 100 lbs; Sulphate of Soda and Sulphate of Potash, each, \$1.00 per 100 lbs; Nitrate of Soda, \$5.00, per 100 lbs; land plaster 50 cts, per 100 lbs; and Muriate of Potash, \$3.00 per 100 lbs.

FOR RYE, BARLEY, OATS AND GRASS:—per acre.

Pure Ground Bones,	125 lbs.
Oil Vitriol, 66°,	50 "
Sulphate of Soda,	50 "
Nitrate of Soda, 96 per ct.	175 "
Sulphate of Potash, 25 per ct.	300 "
Land Plaster,	150 "
	850 "

This will cost, for the 850 lbs. about \$16.20, and for an acre.

FOR BEETS, CARROTS, CABBAGES, HOPS:—per acre.

Pure Ground Bones,	250 lbs.
Oil Vitriol, 66°,	100 "
Muriate of Potash, 80 per ct.	170 "
Nitrate of Soda, 96 per ct.	300 "
Land Plaster,	280 "
	1100

The cost of this will be about \$15.90 for the 1,100 lbs., for the acre.

FOR POTATOES:—per acre.

Pure Ground Bones,	250 lbs.
Oil Vitriol, 66°,	100 "
Muriate of Potash, 80 per ct.	275 "
Sulphate of Ammonia, 25 per ct.	200 "
Land Plaster,	175 "
Sulphate of Soda,	100 "
	1100 "

The cost of this will be about \$15.33.

To all of these costs, of course, must be added the cost of mixing and preparing, which would not be very great; and we think the returns would be profitable, particularly if the land be *deeply plowed* and well pulverized by a *land roller*, so as to crush the lumps and make a fine soil for the roots to feed in, and to retain moisture for the nourishment of the growing plant.

These conditions are necessary to secure the highest results from any and all fertilizers and manures.

A youngster while warming his hands over the kitchen fire, was remonstrated with by his father, who said: "Go 'way from the stove, the weather is not cold." The little fellow, looking up demurely at his stern parent, replied: "I am not heating the weather, I'm warming my hands."

For the Maryland Farmer.

### Nicotine in Tobacco.

*Editors Maryland Farmer:*—I have come across in two or three sources, analyses of Tobacco, showing the percentage of *Nicotine* contained in the various brands from different countries. This principle, in its action on the animal system, is one of the most virulent poisons known; a drop of it in the form of a concentrated solution, has been sufficient to kill a dog; and birds have perished simply upon the approach of a tube containing it.

Perhaps your readers are not aware that when distilled at a temperature above boiling water, tobacco yields an oil containing Nicotine, which has also been found a most virulent poison, a single drop of which, injected into the rectum of a cat has produced death within five minutes; two drops administered in the same way, has killed a dog.

Your readers will, of course, judge for themselves, whether the habitual use of so powerful an agent, is likely to prove beneficial to them; and I send the analyses so that if, for medicinal purposes, its use is desirable, they may at least select those brands containing the least quantity of the destructive principle of the plant.

According to Dr. Paul Jolly, in the late work on Narcotics—tobacco and absinthc—

Tobacco from the Levant, Hungary, Greece,

contains	0.00
Tobacco from Arabia, Havana, Paraguay,	
contains	2.00
Tobacco from Maryland, contains	2.29
" " Alsace contains	3.81
" " Pas-de-Calais, contains	4.96
" " Kentucky, contains	6.09
" " L'Ille-et-Vilaine,	6.20
" " Nord, contains	6.58
" " Virginia contains	6.87
" " Lot-et-Garonne, contains	7.34
" " Lot, contains	7.36

of Nicotine.

Orfila, in his paper on the same subject, gives the percentage of Nicotine in Virginia tobacco at 7.00; in Havana 2.00; in Maryland 2.3. It will thus be seen, from both analyses, that so far as the possession of the poisonous property is concerned, Maryland tobacco ranks as the least dangerous; next to genuine Havana.

D. L.

Clarkville, June, 1877.

AN EGG FARMER.—This is the title of another useful little book, published by the same house, written by H. H. Stoddard. It contains useful instructions for selecting, raising and marketing eggs and poultry; with drawings for coops, houses, &c.



## THE DAIRY.

### COWS AND DAIRYING.

#### IMPORTANCE OF GOOD COWS.

From various information and some experience we well know that keeping poor milkers is not profitable, but that rich milkers are largely profitable; as it costs little or no more to keep a good, than a poor cow.

Prof. John Wilkinson, who is busy putting up his improved dairy apparatus in northern Illinois and Southern Wisconsin, sends us the following:

Having spent some weeks in Illinois and Wisconsin, in locating my improved Dairies, I have had opportunity to examine numbers of herds of cows, for their milking qualities, on *Guenon's* system; which I have been practicing for the past quarter of a century, and find a large proportion of the cows in the districts to which I have been called not worth keeping.

I have been asked to select, from several herds, the best cows, and my patrons express no little surprise, when I have selected their best cows, where the owners have paid attention to their cows, which I am sorry to say, very few have. I have scarcely found a dairyman in this region who knew anything about methods of selecting cows, they appear to have "laid in" their cows on the principle that a cow is a cow, and a low priced cow is a cheap one.

What a fallacy! those who have called me purpose to increase their dairies, i. e. the number of cows. If they were only capable of culling out the worthless ones, and of selecting good ones, all of them could more than double the *yield* of their herd, without increasing the *number*. I did not dare to suggest to those dairymen that they should commence at once the study of the science of Lactology, or Science of Milk.

What a contrast with my patrons in the East; there, every dairyman has given more or less attention to the study of selecting cows for immediate use; also the calves of both sexes, which they purpose to rear for dairy purposes. The "milk mirror" is as visible on the male as on the female, and there is no safety in selecting a bull for service unless the character, or milking qualities of his dam are known, and if practicable, it should be traced back to two or three generations.

G. S. Fasset, Esq., recently read an article to a Dairymen's Association in Vermont. He held, and his position was endorsed, that in a few years the amount of butter produced to the State could be doubled, though the number of cows should be reduced twenty-five per cent.

A Mr. Wood, of Pomfret, Vt., formerly made an average of 100 pounds of butter from each cow; but by care in breeding and selecting, his average is 300 pounds; and the gross product \$100 per cow, or \$60 net.

Another gentleman present stated that he had a cow which yielded 16½ pounds of butter in 7 days, and 400 pounds in one year.

Another stated that he investigated the quality of his dairy, a few years since, and found that five of his cows did not pay for keeping by \$5.00 each, and five others only paid a yearly profit of \$5.00 each; so he was keeping ten cows without profit.

BERMUDA GRASS.—Our Southern papers recommend Bermuda Grass very highly for both pasturage and hay; it is said to withstand the drouth well and winters also; it is much relished by all kinds of stock, yields a large amount of feed, and is perpetual. Having strong, deep roots, it is a good crop to plow under for renovating worn lands.

BALTIMORE AND CHAMBERSBURG R. R.—We have received the charts and proposals for the construction of this important line of railroad, which is to connect the rich Cumberland Valley directly with the Western Maryland R. R., and with Baltimore, and secure a large and important trade from the productive section.

It is an important and much needed link of communication, and will be of great advantage to a large number of excellent farmers, and to Baltimore.

The length of this road is 21 miles, beginning at Chambersburg, Pa. and running East of South to Smithsburg, Md, on the W. M. Railroad, about 72 miles West of Baltimore—the sooner it is made, the better for all parties.

OUR NEIGHBORS' FRUIT.—In the recent excursion and fruit exhibition of the Potomac Fruit Growers, the fruit gardens in the neighborhood of Alexandria won deserved praise, and their fruit took its place at the head of the exposition. The strawberries were especially fine. Many of the single berries of this variety, Monarch of the West, measured 4½ inches in circumference. They also exhibited a specimen of a variety called the "Star of the West," very like the former with meat of fine grain.—[Alexandria Gazette.

PRIZE MEDAL.—The Chester County, Pa. Society has recently awarded a handsome silver medal to Prof. J. Wilkinson, for the best plan of a Milk-house and Essay on Dairying.



THE  
**MARYLAND FARMER,**  
 A STANDARD MAGAZINE.  
**EZRA WHITMAN,**  
 Proprietor.

S. SANDS MILLS, } Conducting Editors.  
 D. S. CURTISS, }

OFFICE, 145 WEST PRATT STREET,  
 Opposite Maltby House,  
 BALTIMORE.

BALTIMORE, JULY 1, 1877.

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D. Lawrence,	Dr. J. E. Snodgrass,
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**Club Subscriptions.**

The subscription price for the MARYLAND FARMER, single copy, is \$1.50 per annum.

In clubs, of five or more, \$1.00 each; and names may still be added to the clubs already made up at the same price.

Any one taking the trouble to get up a club of five, and sending us *five dollars*, can have a sixth copy gratis.

Any subscriber who will get a new subscriber can send us the \$1.00 and keep the 50 cents as commission for his trouble.

Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

To POST MASTERS.—You will see that the subscription price of the MARYLAND FARMER is \$1.50 per year; but you will be allowed a commission of 50 cents on each subscriber that you will send us; that is, send us \$1.00 and keep 50 cents on each.

**SUGAR BEET CULTURE.**

Mr. Burnett Landreth sends us a communication on this subject in which he says—

"The production of beet sugar in 1875 was 1,317,623 tons—a quantity equal to sixty-one per cent. of the cane sugar manufactured in the world. The internal revenue tax upon European beet sugar amounted in 1874-5 to forty millions of dollars. The average production of beet roots is twelve tons per acre, yielding a fraction over one ton of sugar. In Germany the average proportion extracted is 9.1 per cent. The residuum from the press is two and a-half tons from every twelve tons of roots used, and is valued at about five dollars a ton."

This is a great and profitable operation; but, as has frequently been shown, in the MARYLAND FARMER, *watermelons* are a more profitable crop to raise for making sugar; it is less expense to raise them and convert them into sugar than beets; but it is advisable to do both.

**PLASTER OF GYPSUM.**

There seems to be some difference of opinion among farmers as to the benefits of plaster on growing crops; as well as to the reason and manner of benefit.

Without attempting to state specifically *how* this article increases the growth of plants, we can state, from many year's experience, on different land and crops, that it does great good.

Our experience was in this manner: We have sprinkled it on the hills in alternate rows, of both corn and potatoes, when they were well up, to the extent of a large handful to the hill, and in a single week there would be a marked and perceptible increase of the thriftiness and size of those rows which received the plaster above those which did not receive it; another application in a fortnight made a material increase in the yield of grain and of fodder, and of potatoes.

Also, we sowed alternate strips of the wheat fields, in the fall and again in the spring, with the same favorable results from the use of the plaster; then on spring wheat we often made the same experiment with the same beneficial effects; so plain that any observer could see where the plaster was sown and where not.

The same experiments on clover and timothy; and these experiments were more certain and satisfactory than in cases where the plaster was applied to different fields.

We have used it on sandy land, on clay land, and on western prairie land; and in all of them getting much more benefit than the cost; on rich land and on poor land.

These are the hard, positive facts, whatever may be the manner of the effect, or how.



## TRUE EDUCATION.

In the Montgomery county papers we find an excellent Essay, read before the teachers Institute at Rockville, June 7, by Mr H. C. Hallowell which is so full of practical hints, that we make a few brief extracts as being useful to the readers of the MARYLAND FARMER; and the suggestions in regard to practical *muscular* as well as mental culture, are eminently applicable to agriculturists. He says:—"Education, in its various shapes and guise is destined to prove the vital question of the day. Whether we will or not, we must give time and attention to its changing phases."

"The very term to *Educate* is only half understood. It signifies to *lead out*. It is not merely to get certain information, valuable as this may be, but to call forth the highest powers of the mind; to develop the reasoning faculties; to give broad and liberal views; to expand the thought in all directions; and to prevent the growth and spread of that bane of enlightenment, the *man of one idea*. The educated man—I do not say the man of mere learning, but properly educated, with well rounded character—will think better upon every subject."

True, every word of it; an *educated* farmer can do his plowing, planting, hoeing and reaping better than other things being equal; the educated *hand* is aided by the educated *mind*.

"To the educated man, there is unfolded a world of beauty, of mystery, of wonder, more strange than the wildest dreams of the most weird romancer, and which is ever a sealed book to the ignorant and depraved. Life is enriched at every turn; subjects of thought, objects of interest and investigation, are awaiting him each passing moment. He is ever reading the grand story of Creation; he carries a magic glass that converts the material world about him into a marvelous scene of untiring activity."

"Men who will spare no expense for horse or dog, for a conspicuous sign-board or a grand piano, button up their coats as though a North wind was approaching, when appealed to for aid in making a school house more comfortable or to retain a suitable instructor by an increase of salary.

"Yet hear what that great teacher, that gentle loving man Louis Agassiz says on this subject: "The idea that poor teachers can give elementary instruction—that in the beginning, when children are young, the character of the instruction is less important, is a *fatal mistake*. The best teachers should imitate the studies and guide the early development of children."

probation, Dr. Johnson as saying, "That the truly sound and strong mind is the mind that can embrace equally great things and small."

We have given only a few of the thoughts in this wise address, but will give more at another time.

WEEKLY GAZETTE.—For a first class business and family paper, from this city, readers will do well to take the WEEKLY GAZETTE; published Saturdays at \$1.00 per annum.

AMERICAN FARM JOURNAL.—This is the name of a live and handsome Farm Magazine, published at Toledo, Ohio, by J. B. Battelle, Esq., an accomplished scholar and writer.

FISH BREEDING.—From J. H. Klippart, the Secretary, we have received the Report of the Fish Commissioners of Ohio, which represents the operation as quite interesting and successful in that State.

Mr. W. J. Gortner, of Prince George's, one of the neatest and most enterprising farmers of the county, favored us with a visit; he says his wheat and other crops are very promising; he is one of our clover farmers.

Mr. W. D. Hall, a thorough farmer of Lancaster county, Va., gave us a call and pleasant hour's chat; he was just returning from a visit to his friends in Connecticut

#### FOUR BEST ROSES.

Were we, for own taste, limited to *four* roses, and no more, we should select the—

FRANCIS ARAGO,

a hybrid, thrifty grower and profuse bloomer, dark red, compact blooms, in clusters, with a burden of richest perfume, smelling like the ottar of roses.

SAFRANO,

tea rose, fine grower, brownish yellow or salmon color, and delicate perfume, good winter bloomer, and beautiful for its buds.

BALTIMORE BELLE,

a climber, full of blossoms, blush-white, and very fragrant.

GEM OF THE PRAIRIE,

another splendid climber, rich in blooms of fine fragrance, pink-red, flecked finely with white, and of pleasant fragrance.

Could we have only *two* roses, they should be the Arago and Safrano.

With roses, as with all other flowering plants, the blossoms should all be cut off as fast as they are complete or begin to fade, and not be allowed to mature seed; this process will secure finer blooms, longer season of blooming, and greater number of them.

Maturing seeds exhausts plants far more than making blossoms does.

#### SEED WHEAT AND CORN.

It has long been the practice of many successful *wheat* growers, as it was also our own for many years, to select portions of the wheat field where the wheat was stoutest and plumpest, let it stand till thoroughly ripe, then to cut it with sickle or cradle, and carefully lay it and thrash it by itself, keeping it perfectly clean, and brining it in salt-water to free from insects, and to keep them off.

Then with the *corn*, when ripe, we would go through the field and select the largest and soundest ears on stalks having two or more ears on them; this we would gather and put carefully away for seed the next year.

PERSONAL—One day last month, we had a pleasant call from Col. Jones, Prof. of Agriculture in the Maryland College; he was looking bronzed and hearty like a farmer; and was in the city to buy implements, harness and fertilizers for the College farm.

MARYLAND FARMER.—The MARYLAND FARMER for June is promptly on our table, and we note with pleasure that notwithstanding two of the editors are in such demand for other pastures, it manages to keep up the old standard, not omitting the genial chats with the ladies, by our accomplished Agricultural Editor, "Patuxent Planter."—[The Prince Georgian.

YOU WANT A LADY—and who does not?—Geo. W. Campbell, the veteran grape grower of Ohio, in our pages. The large, extra earliest *White Grape* known, ripens middle of August. Hardy, healthy, productive and every-where reliable. Nine years tested, and approved by the best Horticulturists in the Union.



## CALIFORNIA MATTERS.

BY GENERAL A. M. WINN.

Col. D. S. Curtiss: Dear Sir:—The MARYLAND FARMER of April has not arrived; the *May* number is before me, I have glanced over it and am pleased so far; I will take time to read it carefully; your advertising columns are pretty well filled and quite interesting. Money as a medium of exchange is useful and convenient to have; but information as to what we have for sale or want to buy is best obtained by advertising, and helps to pay for the valuable articles written for the good of the producer and consumer.

## YOUR MELON SUGAR ARTICLE

is so plain, simple and easily understood, that any body can make sugar from mellons; those few lines are worth more to the economic farmer than a whole year's subscription. I have heard it stated that great preparations are being made in various portions of our state for making sugar and molasses from grapes and mellons, but I don't know enough about it to give particulars. I have not been able to find seed of the pie-mellow, of which I wrote some time ago; but a friend thinks he may find it for me yet, if so I will send it to you by mail.

## THE BREAK IN MINING STOCKS

has ruined a great many persons in this city. It is astonishing how many people have engaged in it. The farmer, merchants, lawyers, doctors, mechanics and servants of almost every class have been losers. Men who were worth immense fortunes, built fine houses, had fine horses and carriages and drank wines at most extravagant prices, are living on very plain food now, and drinking whiskey straight for a beverage; many of them are foolishly drinking to excess, hoping thereby to forget the frightful change that has come over the spirit of their dreams.

## THE EASTERN PEOPLE

will be benefited by the crash in stock gambling on this coast; their homes will be more attractive to them, they will be content to let well enough alone. We have thousands in this city who have left good homes to make a quick fortune. Many of them are begging for a meal of victuals, having nothing to do. We have more money here than any place in the world, according to population; but it is locked up in the vaults of banks, no one can use it to advantage, hence but little borrowing is going on.

## THE RAIN FALL

is much less than we have had for many years, nearly half the state has dried up already. Cattle are starving for want of grass, while sheep have been driven for weeks, to find feed in the mountains and mountain vallies. The crop of grain will be very short, and but for the irrigation ditches, opened up in the last year, we might have something like a famine, but that will save us. Our gold product must fall short for want of water in the placer diggings.

## REFORM IN EDUCATION

is now occupying the attention of the farmers and mechanics in this state. I send you my report to the *Mechanics' State Council* which was followed by meetings of *Golden Gate Grange* in this city.—This grange is organised as a representative body of men from every part of the state, who meet here and consult about the best interests of farmers.—The information they collect in this way, is diffused through the subordinate granges; thus they keep up inquiries and action between the annual meetings of the state grange, for individual interests.

## SHIPPING IN ICE

is fast becoming a great source of traffic to the Eastern states. Shipping fruit in this way has opened up ideas which promise to be more expansive in practice than the most sanguine expected. Meats and fish will be sent there in great abundance. Our salmon are so large, fat and luscious that they, as well as our lake trout, will bear shipping to New York, thus giving them fresh fish from the rivers and lakes of California.

## FOOD FOR STOCK

is as important as food for man, hence the necessity of care and economy in this particular direction.

The great scarcity in hay this year has set people to thinking how they may use their straw to the best advantage. The English mix their straw with green grass, by alternate layers, making straw absorb the moisture of the grass, thus making both palatable. There is a farmer in San Joaquin, Cal. county, who has adopted that plan to great advantage, and finds that the straw is thus made useful as feed.

## MR. OVERHISER

mowed his stubble last year after the header had gathered the grain, and put it up in stacks; in raking after the mower, he finds the rake takes up all the fine leaves that escaped the header, which the cattle are very fond of. This serves as a glean-ing process, as well, and leaves the ground in much better condition than the barbarous way of burning it off. Mr. Overhiser calculates this feed worth at least ten dollars per ton, and from present appearances will be much more next year.



## HE DRAWS THE STRAW

to his cow-barn, packs it in a trough, soaks it thoroughly with water, then pouring over a pail or so of strong brine, he makes it a most acceptable food for cattle. For his milch cows he spreads bran over it, about a half gallon to each cow; they eat up every thing but the coarse stalks which the sheep clean up after them.

Our farmers have been in a habit of burning their straw to get it out of the way; when I was farming, however, I set the example to take proper care of it, and my neighbors followed suit.

## STRAWBERRIES

are very plenty this season, yet I see it stated that the crop has been so abundant in Santa Clara county that one man has made from \$200 to \$400 per acre, selling at from six to twelve cents per pound; we often pay from fifteen to twenty cents per pound at retail, but the *middle man* must live as well as anybody else, you know. I have seen in market the White Chili strawberry an inch and a quarter in diameter; they taste like a pine apple; 75 cents per pound.—May, 1877.

TOWNSHIPS.—Those who were raised, or have lived long, in the Northern or Western States, well know the many advantages and conveniences of *township organizations*, of dividing the counties into townships of about six miles square. And we have not the least doubt that could the people of Maryland enjoy the system, for a few years, they too would approve the plan, and uphold it.

Each township has the management of its own affairs, as the schools, highways and bridges, keeping the peace, collecting the taxes, &c. Besides being convenient and efficient the working of the system, in those states where it has long existed, engenders and keeps alive a laudable ambition in the towns for superior excellence in all their operations; causes creditable rivalry between the towns to have the best roads, schools, bridges, &c., and to keep them in the best order; and to do effectively what will promote the common welfare of the township, in all matters.

We have only hinted at a few of the known advantages of township organization, where the system has long existed and been thoroughly tested.

BUTTER AND BUTTER MAKER.—Such is the title of a small pamphlet, price 25 cents, which we have received, written by W. P. Hazard, and published by Porter & Coates; it is nicely embellished with engravings of the celebrated herd of Jersey Cows, owned by C. L. Sharpless, Philadelphia.

## EARLY WHEAT.

It has long been a debated question, whether procuring seed wheat from the North or South would advance the harvest. Harvest coming a week or ten days earlier in our climate, sometimes makes a material difference in the quality and quantity of the yield. It is held by farmers that the earlier the wheat ripens, the more certain the crop. Last fall Hon. C. M. Jump, of Chapel district, determined to experiment on the matter, by getting some seed wheat from the south. He sent to Texas, and bought four bushels of Texas grown white wheat, and seeded it on the 10th of October. On the same day, and on the same kind of soil, he seeded some Fultz wheat. He informs us that the Texas wheat is now at least ten days earlier than the Fultz wheat which would seem to be conclusive that wheat will mature earlier where the seed comes from the south. This fact may prove important to our farmers.—[Easton Star.]

MARYLAND INSTITUTE.—The 29th Annual Report of the Maryland Institute, showing its operations and condition. It has done a good work in Art, Science and Education; but is now restricted and crippled, for want of funds, in which those who are rich financially might do themselves honor, and the public a great benefit by bequests of funds.

WISHED THEY WOULD QUIT FIGHTING.—An old lady from Pitt County stepped into Capt. Brown's store on Saturday and inquired the price of Flour. Mr. Red Thomas, the polite good-looking clerk, told her flour had gone up \$2 per barrel on account of the Russians and Turks fighting.

"I wish the Roosters and Turkeys would quit fighting—before God I do," moaned the old lady shaking her head.—[Tarboro Southerner.]

MARYLAND FARMER.—The June number of the Maryland Farmer, published by Ezra Whitman, Baltimore, has been received. It is, as usual with all its preceding numbers, filled with instructive and interesting reading to those engaged in agricultural and horticultural pursuits. The Farmer is new in its fourteenth year, and like wine improves with age.—[Alex. Gazette.]

WOMEN IN BATTLE.—Such is the title of one of the most intensely interesting books ever published, being the Adventures and Exploits of Lieut. Harry T. Buford (C. S. A.) or Madame L. J. Velasquez, advertised in our pages.



### Mysteries of the Rose.

All the discoveries of science fall short of revealing the secrets of natural perfume. The microscope compels the very nomads of life to show their organic character under its lens—gases can be analyzed and weighed, but the odor of the musk or of the rose—what is it? Could this question be answered, and the cause of the fragrance of the rose, ect., be defined like that of sulphurous, sulphuretic, hydrogenic, or ammonial odors, an enormous stride in hygiene and in chemistry might be recorded.—[Exchange.

TRYING TO LIVE WITHOUT WORK.—The following from the pen of Horace Greeley is true, and applicable to this day: "Our people are too widely inclined to shun the quiet ways of productive labor and try to live and thrive in the crooked paths of speculation and needless traffic. We have deplorably few boys learning trades, with ten times too many anxious to "get into business;" that is, to devise some scheme whereby they may live without work. Of the journeymen mechanics now at work in this city, we judge that two-thirds were born in Europe; and the disparity is steadily augmenting. One million families are trying to live by selling liquors, tobacco, candy, etc., in our cities, who could be spared therefrom without the slightest public detriment; and if these were transferred to the soil, and set to growing grain, meats, wools, etc., or employed in smelting the metals or weaving the fabrics for which we are still running into debt in Europe, our country would increase its wealth at least twice as fast as now, and there would be far less complaint of "dull trade" and hard times).

AGRICULTURAL SOCIETY.—A meeting of the Frederick County Agricultural Society, will take place on Saturday morning next, June 9th at 10 o'clock, at the Court House. The meeting has been called for the purpose of receiving the report of the Committee on Premium Lists, and also to elect a Chief Marshal for the coming exhibition. A large attendance of the members is expected.—Every effort is now being put forward by the officers to make the coming Fair *the Fair of the State*. Liberal inducements will be offered to exhibitors, and from a few facts already in our possession, we are lead to believe that our Society at the coming Fair will hold their well earned title, "Excelsior!"—[Frederick Examiner.

The Society Islands depend chiefly on cocoanuts for their income. A cocoanut tree yields about one dollar's worth a year.—[Balto. Gazette.

### BROOM-CORN RAISING.

So far as the land and location are suitable and requisite markets are accessible, it is advisable for the farmer to grow diversity of crops and fruits; at least, as far as possible, produce all articles consumed at home.

On this principle broom-corn should not be neglected; it is a crop that brings a good price in the markets, is easily grown, the seed is useful for feed, and brooms for home use can easily be made by ordinary laborers. And in some localities farmers may profitably employ much otherwise leisure time, in the barn or farm shop, in making brooms for his neighbors, distant from stores.

Orange Judd Publishing Company sell a very nice little volume on this subject, from which almost any one can learn to raise Broom-Corn and to make brooms.

A NEW DODGE.—A gentleman of this city writes to us as follows; "Will you be kind enough to bring under the notice of the citizens a new dodge to evade the law. My cow, being very gentle and in good order, returned home to-night with a new mark cut in both ears, evidently preparing the way for beef when the new mark heels. In self defence some method of branding will have to be resorted to. "Look out for your fat cows." If there is any possible way of meeting such cases we hope the proper measures will be taken.—[Wilmington, N. C. Star.

DON'T ROB THE BIRD'S NEST.—In the course of a recent lecture in Paris regarding the uses of birds an estimate was formed of the damage to crops by the robbery of a nest containing five eggs. During the first month each young bird eats on an average about fifty-eight flies or other insects in a day. The aggregate multiplied by thirty, for the month makes 7,500 insects to every nest. Every insect eats daily from blossoms and leaves an amount equalling its weight until it reaches maturity.—[Port Tobacco Times.

AGRICULTURAL COLLEGE.—The Board of Trustees of the Maryland Agricultural College met at the College on Wednesday. COL. EARLE, MAJOR JOHN F. LEE, JUDGE TUCK, MESSRS. EZRA WHITMAN, ALLEN DODGE, and WM. B. SANDS were present. President PARKER's report was read and approved. The finances show, after liquidating the old debt, a balance in favor of the College of \$1,000 to June 1. Every member of the faculty made a full report. MR. COLUMBTS J. SHIPLEY, of Catonsville, was elected superintendent of the farm.—[Marlboro Gazette.



### Invisible Ink.

If we write with a very dilute solution of chloride of copper, which has scarcely more color than pure water, the characters are invisible; but if gently heated, they become distinctly yellow, and are easily read. Let the paper cool, and they vanish; and they may be made to appear and disappear an indefinite number of times. If heated too strongly, the compound is decomposed, and the writing becomes permanently brown from decomposition of the copper. The chloride of copper may be conveniently made by mixing solutions of ammoniac chloride (sal ammoniac) and of cupric sulphate (blue vitriol).—[Exchange.]

PIEDMONT AGRICULTURAL FAIR.—The Piedmont, Va., Agricultural Society, have got out a handsome program, in pamphlet form, of their sixth annual fair, to be held at their splendid grounds, Culpeper, Va., the third week in October next. Col. S. S. Bradford is President, and J. S. B. Thompson, Secretary. The Society offers a large amount in liberal premiums.

Hon. R. W. Thompson, Secretary of the Navy, is expected to deliver the address, he is said to be a native of Culpeper.

CORN FOR FODDER.—It is not yet too late to plant corn for fodder; let it be sown broadcast or in drills, on land plowed deep and fine, well harrowed, and well crushed with a land roller. If treated in this manner corn planted for fodder, even in July, will produce a large mass of feed, before the close of October, which will keep cows in milk and horses in flesh all through the winter; and then give piles of manure, for next spring's use, paying a large profit.

SCIENTIFIC EXPEDITION.—Sometime ago Prof. J. O. Woodruff and Gen. Daniel Macauley projected a "scientific expedition" around the world, for the purpose of visiting various points of interest on the globe; for discovery and collections of the *fauna*, *flora*, and other objects; as well from the well known as the less known localities of the world; a purely educational enterprise, which students may accompany; to start in October, '77, and return October, '79. The enterprise is endorsed by Gov. Williams of Indiana, and Prof. Henry of the Smithsonian Institute, at Washington. We have been favored with their pamphlet circular.

CHESTER COUNTY FAIR.—The annual fair of Chester County, Pa., will take place at West Chester, 20th September, 1877.

### Ferns.

The *Boston Transcript* says that the ordinary ferns that grow wild all over the country can be taken home, and in the late autumn exposed to the frost, better be "frozen dead," and after a few weeks of rest in this condition may be gradually thawed out, following the course of nature as far as possible. Then, planted in ferneries, the roots soon sprout and the leaf develops, and the plant is reproduced in all its perfectness. This is not theory merely, but the result of observation by a lady who evidently knows how to use her eyes as brain.

SHEEP IN GEORGIA.—We have received from Dr. Janes, Commissioner of Agriculture for Georgia, a Manual on sheep Husbandry, from which we learn that from all tests it seems that crosses on the Merino are the most profitable in that State; and that all the facts prove that sheep raising is more profitable than cotton growing; that the latter hardly pays the cost of production, while the former pays a handsome profit.

GINSENG, *Panax*: SWEET-CICELY *Osmorhiza*.—These grow in the forests of the northern states—in deep, rich soil, generally in beech and maple woods, on the Genesee flats, etc. Boys are fond of eating the roots. SARSAPARILLA, species of *smilax*; grows in forests of rich mold, where the above do.

To grow these wild plants, the soil should be deep, rich, loose and loamy—like the leaf-mold of the forests, and kept shaded, in the summer, particularly.

THE MARYLAND FARMER—Is perhaps better suited for the practical farmer than most other periodicals of its class. It is suggestive of valuable hints to men of small means, which we should think ought to popularize it with agriculturists generally. The prejudice existing in the minds of farmers to book knowledge grows out of the fact, the most of them are only expensive theories, which would bankrupt a farmer of ordinary means to follow. This Magazine is a valuable exception.—[Baltimore Herald.]

JULY NUMBER.—The last number (June) completed the first half of this volume of the MARYLAND FARMER; and the present (July) number commences the second half of the volume, and is a good time for those to subscribe who have not yet done so.



## SOUND and RELIABLE.

We give no advice or facts in the editorial columns of this Magazine, that we have not good reasons for knowing are true and reliable, either from experience or careful observation.

The directions and suggestions in the MARYLAND FARMER, on *deep plowing* growing grass and clover, stock raising and dairying, if faithfully carried out and followed up, will add thousands of dollars and general success to its many readers, and will richly pay them, over and over, for the price of subscription.

The Maryland Farmer is *practical*, and not *wildly theoretical*; the truth is stated, in the Baltimore "Herald," when it says "that the prejudice against book farming is on account of *costly theories*," but "that this Magazine is a valuable exception." We give no theory that is not well proven to be practical, and useful; reliable and safe.

Seven heifers purchased in Kentucky at a cost of \$35,000 have arrived in New York. They are of the breed known as the "Rose of Sharon," and where bought for persons in England, to whom they will be shipped.—[Exchange.

HOG RINGER.—We are informed that HILL'S HOG RINGER AND RINGS are all that could be desired, and soon pay for themselves in savings.

POULTRY YARD AND MARKET, by Prof. A. Corbett, is a small volume, containing much useful information on that subject.

THE BALTIMORE HERALD, for June, is filled with a mass of good reading, alike for the family and business men.

BOOKWALTER ENGINES.—We have received a pamphlet description of these Engines, from Ohio.

A recent visitor at the South reports that he found not a white man idle, people formerly wealthy following humble industrial occupations.

One hundred thousand boxes of cheese have been shipped from New York to Europe within the last twenty days.

Buffalo florists have doubled their trade within the past two years, and are making efforts to have a floral hall erected for the sale and exhibition of their products.

A Rhode Island mule kicked a boy into Massachusetts the other day.

Buying a horse by photograph is getting the carte before the horse.

## The Dairy in Illinois.

At the March meeting of the Madison County, (Ill.) Farmers' Club, its President, Mr. N. S. Gay, read an address on dairying, in which, among other things, he related the practical results arrived at by himself and others. We give some extracts:

Mr. Robert Bryce, director and business manager of the Mt. Cabanne Creamery of Butler, Ill., wrote me under date of Feb. 16, that their factory was working like clock work, that his 32 cows averaged him \$52.50 each the past year, which is ten to fifteen dollars above the average of Eastern dairies. Over \$2,700 earnings and only about \$5,000 capital invested is a good showing, and should induce men having the necessary qualifications to erect cheese factories in suitable localities in our country. The butter factory paid the farmers between eight and nine cents a gallon for milk, which again is a better price than Eastern farmers get.

Mr. J. H. Smith, of Moro, wrote me—19 cows, average per cow, 638 8-16 gallons; average per day,  $1\frac{3}{4}$  gallons nearly.—[Butter and Cheese Reporter.

CROPS AND LAND.—The imminent harvest of wheat is spoken of by papers in all parts of the State as being exceptional in quantity and quality.

"Cedar Grove" farm, about 400 acres, in Somerset county, has been bought by Hon. George R. Dennis for \$6,000.

The county tax in Somerset for this year is fixed at 86 cents in the \$100, being 17 cents less than the tax of 1876.

The Barclay Vail farm near Abingdon, Harford county, 200 acres, has been sold to L. W. Vail for \$4,400.

The Fout farm, near Frederick city, 147 acres, has been sold to James M. Hood for \$107,78 per acre.

The Rockville Sentinel denies that the Western grasshopper is obstructing agricultural navigation in Montgomery county.

Wheat growers are in the midst of their golden harvest in several of the counties of Maryland, and the yield gives promise of much quantity.—[Sun, June 23.

Fort Worth, Texas, is making the experiment of shipping fresh meat in refrigerator cars to Western cities.



### Cull your Fruit.

Growers who will realize the best profits on their crop of fruits, of whatever kind, will most surely secure that result by carefully sorting their fruit.

One quart of handsome, large assorted berries will sell for much more than one not picket over, for much more than the extra cost of so nicely preparing it; while it costs no more freight or expense to market it.

So, with a bushel of peaches or pears. We knew a fruit grower, near Washington, who always carefully sorted his pears and peaches, and even his clusters of grapes, and thereby realized almost double profits; and then sold the cullings or indifferent fruit for nearly the price received for the general lots in the markets. He secured a lot of customers—among good families and best hotels—who desired only nice fruit, knowing they could rely upon his, and were willing to pay good prices.

And the same will hold true in large lots; where a large grower, with a steam-boat load, is known to take pains to carefully assort his fruit he can secure first customers, at best prices, while others will go a-begging and be forced to sell at hardly paying prices; besides, this system is not likely to glut the market at any time.

**CLOVER AND WORN LAND.**—Whenever a field becomes worn out by constant tillage and hard usage, the best course is to plant it in clover and let the animals run in it. As to the amount of manure relatively derived from different animals, the following may be of interest: An average cow, well fed, evacuates from 60 to 80 pounds of dung daily, or say from 11 to 14½ tons a year, while the urine may be estimated at 15 tons yearly.

In "Morton's Cyclopedic" we find it stated that a cow furnishes annually 20,000 pounds solid excrement, and 8,000 pounds urine, which is considerably under the mark and differs widely from the figures of a number of practical experimenters.

The dung of the horse has not the same proportion to the food of the horse, that exists between the food and the dung of the cow. Morton in his "Cyclopedia of Agriculture," gives the total dung evacuated by a horse as 12,000 pounds yearly, and the urine as 3,000 pounds.

A sheep furnishes annually 760 pounds solid excrement and 380 pounds of urine. A pig furnishes annually 1,800 pounds of solid excrement and 1,200 pounds of urine. The fresh cow dung contains from 86 to 88 per cent. of water; fresh horse dung about 77 per cent.; sheep dung about 56 per cent., and pig dung about 77 per cent.—[Exchange.

### Selling Eggs by Weight.

What is there to encourage farmers or their wives to keep large, expensive fowls for which they pay a high price, and produce large eggs outside of home use, if fowls are kept principally for eggs? A dozen is a dozen, no matter how large or small; there is no justice in selling eggs by the dozen; the consumer will answer, "No justice," and well they may, when they see the difference in size.—Now, representatives are sent from every town in the State to meet at the capitol to make and amend laws; they make bird laws, fish laws, dog laws, and all other laws; so many pounds of grain and vegetables in a bushel, and butter and cheese is sold by the pound; we have the laws and can read them at leisure, but we find no law to fix the price of eggs, only the law of custom, by the dozen. Thousands of hens are kept in Vermont of all breeds and sizes. Let the women in Vermont raise a united cry for justice, buy and sell eggs by the pound.—[Vermont Farmer.

**MARKETS.**—New potatoes 50 cents peck; beans 25 cents peck; peas 25 cents peck; cymblings 25 cents dozen; tomatoes 60 to 75 cents quarter peck; Bermuda onions 80 cents peck; cucumbers 40 to 60 cents dozen; cabbage 4 to 12 cents head.

**Berries**—Raspberries 12 cents; dewberries 12 cents; gooseberries 5 cents; currants 10 cents; cherries 8 to 10 cents quart. New apples 40 cents peck; peaches from Savannah \$2 peck for choice.

**Eggs** 22 cents dozen; butter 20 to 35 cents pound; chickens 60 cents to \$1 pair. The butcher stalls showed the usual abundance of meats, which were sold at about previous prices. In the fish market taylor were sold at 25 cents for three; bay mackerel 10 to 25 cents each; porgies 25 cents each; sheepshead 25 cents to \$1 each; perch and pike 25 to 50 cents bunch; dressed eels and catfish 25 cents per paper; hard crabs 25 to 30 cents dozen; soft crabs 50 cents to \$1.50 dozen.—[Sun, June 22.

**THE BLACKBERRY INDUSTRY** in Georgia, North Carolina and other Southern States is about to open. The little town of Salem, N. C., containing only about 2,000 inhabitants, has shipped during three years over 3,000,000 pounds of blackberries, for which nearly half a million dollars was received. This was equal to over 9,000 bales of cotton at ten cents a pound, and is a resource certainly not to be despised.

Virginia new wheat was received in Baltimore, June 22.



### Profitable Pigs:

Bought two April pigs, grade Berkshire, the two weighing about 125 pounds. They were fed altogether on shelled corn, soaked from 24 to 36 hours, until freezing weather, about the middle of November; from which time until butchered, the soaked corn was mixed with boiled corn, and warmed. They ran in an ordinary pasture, with constant access to pure water, and had one or two bucketfuls of house slops per day. Butchered on December 14th; the two weighed 418 pounds net, equal to 525 pounds gross, having gained 400 pounds in three and a-half months, which averages about  $1\frac{7}{8}$  pounds each per day. The account stands as follows:

To cost of two pigs . . . . .	\$6.00	
" 7 bus. old corn at 60 cts. . . .	4.20	
" $15\frac{1}{2}$ bus. new corn at 50 cts. . .	7.75	17.95
By 525 lbs., gross, at $6\frac{1}{2}$ cts. . .		34.12
Profit, . . . . .	\$16.17	

Twenty-two and a-half bushels of corn made 400 pounds live weight, making  $17\frac{1}{2}$  pounds per bushel, and paying 113 cents per bushel for the corn; a pretty good price, and made without grinding-out any more paper money either.—[Exchange.]

THE AMERICAN DAIRY.—The Secretary, R. M. Sittler, has sent us the report of proceedings, in the form of a handsome rose-tinted pamphlet, of the fourth annual convention of the National Dairyman's Association, held during the second week in March last. It was a highly useful and pleasant session; and adjourned to meet in Chicago, Ills., for the fifth annual session, at Chicago on the first Wednesday in March next. Geo. E. Gooch, of Chicago was chosen President,

PEARS IN THE *New Orleans* MARKET.—Mr. R. Seaton, of the Mississippi Gulf Coast, sent over on the 21st May, his first shipment of pears for this season. The varieties shipped are the Madeleine and Doyenne the d'Etc. These are both early summer varieties, but this is rather crowding the season.—[Our Home Journal.]

WHEN TO CUT CLOVER.—Many people wait too long before cutting their clover for hay.

To make the very best hay it should be cut before any of leaves or blossoms turn brown. If they are allowed to do so, they are sure to become very dry and to be powdered into dust, which is injurious to the horses which eat it, and also depreciates the value of the hay.

Clover should be cut early.

THE MARYLAND FARMER, published by Ezra Whitman, Baltimore, Md., is one of the best and cheapest agricultural magazines received at this office. The present number (June) contains able articles on everything pertaining to the farm.—[Frederick Examiner.]

MARYLAND FARMER.—The June number of this useful journal is before us and upon an examination of its pages find them well filled as usual with valuable information for all who are in any way engaged in the cultivation of the soil. How any farmer can afford to be without such a journal, at only \$1.50 per year, is a matter of great surprise to us.—[Port Tobacco Times.]

MARYLAND FARMER.—The June number of the Maryland Farmer has been received. From its many useful articles upon all subjects of interest to those engaged in agricultural pursuits, this journal has become to be regarded as almost indispensable.—[Rockville Advocate.]

THE MARYLAND FARMER for June is filled with practical advice and suggestions for the agricultural and horticultural professions. It is a very useful periodical. Published by Ezra Whitman, No. 145 West Pratt street, Baltimore.—[Balto. Gazette.]

MARYLAND FARMER.—The June number of the Maryland Farmer is early on our table this month. It is a good number and has many good, practical hints for farmers.—[Marlboro Gazette.]

GLAMORGAN.—We had the pleasure, one day last month, of seeing this fine blooded horse, in our streets and of handling him; he was attached to a light wagon, and moved with the most admirable gait and grace. He is exceedingly kind, gentle, spirited and playful; he has very fine limbs but cordy and strong; and he is every way splendidly and powerfully made up, with large lungs and chest giving massive breathing apparatus. Altogether, we regard him the handsomest horse we have seen in the state. He has a beautiful head, face and ears. His color is a sunny bay, with bright black mane and tail. In fact, he has strength for the team, elegance for the carriage, and speed for the turf; and with all, there is nothing recommends him to our own favor more than his good nature and spirit. Mr Easter justly prizes him very highly.

OLD SICKLE.—The oldest piece of iron (wrought iron) now known is probably the sickle blade found by Belzoni under the base of the Sphynx in Karnac, near Thebes.



### RAISING CHICKS.

If a hen break an egg in her nest, take warm water and wash it off nicely, as the broken egg will coat others over with an air tight paste filling the pores and causing them to rot and not to hatch; don't fail to do this, and then blame failure to hatch on the eggs.

Sprinkling the eggs with warm water is, I think, a benefit if done a day or two before hatching; it tends to soften the shell. By numerous experiments in helping chicks from the shell it is what I call a small business. In nine cases out of ten the chicks die; if not directly, they are very weak, and puny, and don't live long.

I have tried holding them in warm water while I performed the operation, but that was little better. Leave them under the hen till they break the shell and come forth themselves, and then they will be stronger.

If the hen be restless keep a watch and take the chicks from her as soon as they are out, until all are out, and then you may give them to her and all will be right; but if she is gentle and sober, as most Brahmas are, it is better to leave them under her till all are out, and then you can move to other quarters; always try to have a clean, dry place, and let them be quiet for about 36 hours without food, nature has supplied them with a portion and I have thus far found it better not to feed the first day, and don't give too much the first time, but increase the quantity gradually.

The best food I find is clean sweet corn meal seasoned with a little salt just about as you would like it yourself. The old "foggy" idea that salt will kill young chicks has been exploded a very little will not hurt them. Sour feed of any kind is unfit for young chicks, it causes indigestion and hard crops. When they are 2 or 3 days old it is well to give them a little variety, pounded grain, bread crumbs, meat scraps, &c., always having good fresh water near, that they may use as nature requires. If you wish to give a hen chicks, other than her own, always put them under the hen at night and likely she will never notice it. Don't use overgrown hens to raise chicks, especially if they are of a small variety, as the Leghorm; it is best to use such Brahmas as are a little run out and not so feathery-legged and clumsy, as they

I have never found any hen to make as good a mother as the Brahma; the common barn-yard fowl is very often a poor mother; keep a watch for parasites you will find them stuck on top of the head, give them a dose of grease with a little Red Precepsitate in it or they will bring you to grief.

*Pikesville, May 7th, 1877. A. W. FRIZZELL.*

SCIENTIFIC FARMERS.—What does the most skillful farmer know of the hidden truths of the science of agriculture? An educated man is a man of culture. When that culture is applied to his profession then he is educated in that profession. But neither culture nor education alone will command success in any vocation of life. They must be applied practically to ensure success. A man of culture studies law or medicine, and becomes more nicely educated, but he will never become distinguished as a lawyer or doctor until he shall have had success at the bar or bedside.

A man of culture may acquire great knowledge, and yet on the farm prove to be a perfect leather-head. A man may master chemistry and all that pertains to agriculture as a science, and yet without the experience of the every-day routine of a farmer's life, never attain success as a farmer.

An "educated farmer" then, to our mind, is a man of culture, who has acquired scientific knowledge which he has applied experimentally to the farm with success. How many such men do our readers know? We do not know one.—*News.*

"TOUCH ME GENTLY, FATHER TIME,"—Is the title of a new and beautiful song and chorus by Charles Baker, author of the famous "He Holds the Fort of Heaven." Dealers are ordering it by the thousand. The whole world will soon be singing "Touch me Gently, Father Time." Any music dealer will mail you this beautiful song for 40 cents. Published by F. W. Helmick, 50 West 4th street. Cincinnati.

MR. RICHARD T. MERRICK has purchased the magnificent tract of land known as the Peter's estate, near Ellicott City, Md. It includes about four hundred acres, forty or fifty acres of which, surrounding the splendid stone mansion, is laid off as a park, with fine drives and walks, and is filled with grand old trees and beautiful shrubbery. In the future, as a citizen of Maryland, this will be Mr. Merrick's summer residence.

GOOD.—What is the difference between spermaceti and a schooldoy's howl? One is the wax produced by the whale, and the other is the wail produced by the whacks.—[Exchange.]

WOOL BURNT.—On the 9th June, fire occurred in the dry-house of the Auburn (N. Y.) woolen mill, causing a loss of about \$100,000, nearly 300,000 pounds of wool being destroyed. Work will have to be suspended a month at least, throwing three hundred operatives out of employment.



RIGHT AND GRATIFYING.—One of our most esteemed subscribers, E. A. B., West Virginia, writes, (enclosing \$1.50) as follows :

"I have been reading *your* valuable Magazine, for the last six months, and now wish to read *my own* the balance of the year."

Mr. B. has always promptly paid for his paper at the beginning of the year, but happened to neglect half the year this time, for which we find no fault, but thank him for his punctuality—and trust several, we could name, will go do likewise.

WEATHER REPORT.—The Signal Corps has our thanks for the May report, from that service.

It shows the rainfall of May to be 1.95 inches, less than before, the average temperature of the month was 61.1°—a little colder than last year; the above figures show the past May to have been something dryer and colder than in previous years.

HARVEST REPORTS.—We would be glad, and thank our readers, if they would send us short letters, from each county and town, during this month, giving us the results of the grain harvest and haying, with the appearance and prospects of the corn crop, and other farming information, as also about Fruits.

FREDERICK COUNTY.—The Agricultural Society of this county will hold its fair during the 2d week in October.

The crop prospects in Frederick are very promising, particularly the wheat and corn.

CURLED BARK.—In another column will be found an able and useful communication on this topic, from the experienced and intelligent orchardist, Mr. John Fitz, for which he has our thanks.

TEN CAR LOADS OF FINE PEACHES have already been received in Philadelphia, and readily disposed of there and in New York and Boston. The fruit arrived in excellent condition. The Southern crop will hold the market until the early varieties from Eastern Virginia, Maryland and Delaware put in an appearance.—[Sun, June 21.

GOLDSMITH MAID AND RARUS.—The Alta California, in a recent issue, says of this race:

The so-called race of yesterday, between Goldsmith Maid and Rarus, over the Oakland course, was an event entirely void of interest. In point of merit it was blank; and the thousands of liberal patrons who paid their gate and seat money to see two first-class horses trot were nicely duped.

NEW MARKET SCHOOL.—We have received the handsome catalogue of the New Market *Polytechnic* School, of which Prof. B. Hyde Benton is President. This we regard as one of the very best schools in our country in which to obtain a practical business education.

THE BEETLE.—We regret to learn from our farmer friends who have honored our sanctum the past week, that the potato bugs are as numerous and destructive this season as they have been in past years. As these pests are certain to destroy the potato crop unless they are destroyed, it behooves all good farmers to be on the alert.—Exchange.

SOUTHERN POULTRY JOURNAL.—This handsome and ably edited magazine is on our table. It is finely embellished with engravings; published at Louisville, Ky.; its advr, in another column will give particulars.

EARLY PEACHES.—Among the first peaches to arrive in Baltimore this season was a box of "Early Troths," received by express this morning by Lewis Jones & Sons, 70 Light street, from North Carolina. The price asked for the peaches was five dollars.—[News, June 21st.

VASSAR COLLEGE.—We have received the Catalogue and history of this popular institution: it is a large, handsome pamphlet, on beautiful paper, and richly illustrated with fine engravings, of the grounds, buildings and surrounding landscapes. Vassar is one of the most useful colleges in this country.

FINE COTSWOLD SHEEP.—In another column of our paper will be found the advertisement of Mr. C. J. B. Mitchell, in which he offers first-class Cotswold sheep for sale; they can be relied on.

SHEPHERD DOGS.—We have received the Circular of D. Z. Evans, of valuable Shepherd Dogs. They are the most useful dogs that can be kept on a farm, and least likely to do mischief.

WM. A. WALLACE, auctioneer,, sold for Joseph K. Roberts, Jr., Esq., trustee, on Saturday last, a lot of ground situated near Hyattsville, containing 22 acres, for \$52 per acre. Mr. R. L. Coleman, of Baltimore, purchaser.—[Marlboro Gazette.

HOT WEATHER.—Again we had sissing hot weather on the 19, 20, and 21st days of June, high up into the 90's; 94° in the shade.



## LADIES DEPARTMENT.

## CHATS WITH THE LADIES FOR JULY.

BY PATUXEET PLANTER.

"June's flower-wreathed sceptre is dropped with a sigh.  
And forth like an empress steps stately JULY:  
She sits all unveiled, amidst sunshine and balms,  
As Zenobia sat in her City of palms!"

This month the heat is too intense for out-door exposure, except at early morn and evening. During those hours our fair friends should exercise all they can, either in the dairy, flower-garden, with the poultry, gathering fruits and flowers, or on horseback, playing croquet, or in taking pleasant constitutional walks. Our country women do not, as a rule, take half the exercise they should. They are too *fair*, from housing themselves and being inactive. They should be more ruddy and show a complexion slightly browned by the sun. Lady equestrianism is a noble, beautiful and health-giving accomplishment. A woman never looks so bewitching, attractive, or so graceful, as when mounted on a handsome horse, and is perfect mistress of the situation. Playing on the harp, walking, or dancing are exercises that afford opportunity for the display of womanly gracefulness, and setting off to the best advantage her figure by acquiring natural and dexterous attitudes; yet, neither one nor all, equal the back of an elegant horse, which is literally a beautiful living spring-board, that lends a witching charm to every pose and every movement of its captivating rider. Ladies should learn to drive also, as such exercises literally drive away ill health and are nervines for those who think it sweet to scream on seeing a mouse, or faint if a horse becomes unruly, just when their friend's whole attention should be given to curbing the animal.

*Flower-Garden.*—This month is not usually favorable to flowers, though there should be a goodly quantity in every flower garden, and by a free use of water the effects of drought, and the burning sunshine may be ameliorated so that a continuous bloom may be kept up. It is, however, a season which requires much watchfulness and some labor to prevent the flower beds from taking a sort of sleep, after yielding so much satisfaction by their wealth of beauty displayed for the last three months, that they may again become magnificent on the approach and during autumn. At this season, flowers are apt to be infected with inimical insects, and I will call your attention to a simple remedy, credibly vouched for, but which I have never tried. Steep in water some fresh tomato leaves and sprin-

kle the infusion on plants and shrubs, and the innumerable insects will be driven away. It is so easy and cleanly a remedy against the ugly noxious pests, that I would advise every lady to try it; if true, it is a great discovery, and, if not, there is no great harm done. Some people think that a writer should only write or talk original matter. But if a man wishes to give instruction or amusement, to his readers or hearers, and he finds somebody has said or written something exactly in point of view better than he could unfold it; or he meets with an anecdote or witicism, far better than he could imagine, for illustration of his subject, he should in justice to his reader or hearer, substitute the same for his own tamer ideas. Therefore I give you the plain, concise and practical suggestions of that popular correspondent of the Country Gentleman, the often quoted *Daisy Eye Bright* as to how

## TO START CUTTINGS.

Cuttings of many plants can be readily started in water, and in the early spring, if you have not a greenhouse or hot bed, it is the safest plan.

Fill small bottles or phials with warmish water and remove the lower leaves of the cuttings (be sure to have a bud at the base) and put them in water; hang up the phial to the window sash, tying a string about the mouth for this purpose. If cotton or wool is put around the mouth of the phial, it will prevent the evaporation of the water and make the roots sprout more quickly by keeping a more even temperature. Oleanders can be rooted in this manner; also heliotropes, verbenas, roses, fuchsias, and all kinds of bedding-out plants.

The process is so simple that a mere child can succeed with it. As soon as the roots are an inch long, the cutting should be transplanted, taking care to spread out the tiny rootlets as they grew in the water.

Some fill up the bottle with rich earth, let it dry off for two or three days and then break the glass, and pot or plant out the cuttings without disturbing its roots in the least degree. This is the most certain way of obtaining plants from cuttings.

As that delicious and universally enjoyed fruit—the peach, will soon be in season, I append a couple of recipes which I think equal if not exceed, the peach cakes, or bread, that two years ago I recommended so highly. I still maintain that peach cake is better than strawberry short-cake. The latter fails because so few will make it of suet "shortening;" saying it is too rich. Nonsense! Nothing is too rich for a wholesome stomach. Peaches being very wholesome, and liked by everybody, we can't have them too often, or in too many ways set before us while they are in season, hence I give



these recipes, altho' I must say, my way of enjoying this fruit to the fullest extent, is, to have them on thrifty young trees *of your own growing*, and with a pretty girl who "doats on peaches," and can talk sensibly, close by you, gather the luscious fruit; pare with a silver bladed knife, and while she takes half, you eat the other half—keep on, and after an hour or before, perhaps, you will bless God for making such a fruit.

These recipes I found last year in the American Stock Journal—

*Fried Peaches.*—Take good sized free-stone peaches, wipe them with a towel, halve them and place them flat side down in hot butter or lard. Let them fry to a nice brown, then turn and fill the seed cup with sugar, which by the time the fruit is properly cooked, will be melted and form, with the juice of the peach, a rich syrup. Serve up hot, and if you don't like them you need not repeat the experiment. Most people think the dish a superb one.

*Baked Peaches.*—Cut the peaches in two, remove the stone, having first wiped the fruit well. With a paste cutter (if you want something fanciful, otherwise, simple squares will do) cut some slices of bread. On each piece place half a peach, skin down; dust well with sugar; put a tiny piece of butter on each, and bake slowly. When done dish them and turn the juice over, if any; otherwise, add syrup of pears and serve warm. Apricots and prunes may be served likewise.

As this is also the time when peas are plenty, and when we become satisfied with every day style of their being served up, pardon me for suggesting that by way of variety you try the following from an exchange paper: I assure you it will be found delightful, and I recommend its trial. I would add one onion chopt fine, with part of the tender portion of tops, and a little parsely or thyme cut minutely fine.

*Green Pea Soup without Meat.*—Two lettuces, two cucumbers, three onions and a pint of peas; put them cut up in a stew pan with a quarter of a pound of fresh butter, and a little pepper and salt; cover them down and let them stew till tender. Have a quart of peas stewing in two quarts of water with a sprig of mint; when done pulp them through a sieve, add the liquor they were stewed in and the other ingredients.

SEE A. E. GROFF'S Advertisement of full blooded swine, which are very fine.

COLLINS & FLEEHEARTY, advertise some useful articles in our pages for farmers.

*For the Maryland Farmer.*

### RURAL ATTRACTIONS.

We receive the FARMER and find it unusually interesting; as its contents afford us much pleasure, and as it is not quite the first thing to receive pleasure without returning it, I will here contribute my offering, in expression of my sympathy with all lovers of Nature.

The Creator is ever present with us through His works; and eminently so, in the first bursting and opening of Spring, with all its new or re-newed life.

Could we once vividly, view for the first time, the awakening of Spring from the torpor of Winter, we should be amazed by the wonderful change—the world of beauty thus suddenly spread before us. "Nature's charms are open to all; on every hand we are greeted by her beauties; she spreads out before us her numerous productions of great variety; the majestic trees stand as sentinels to direct the weary traveler and protect him from the storms and the noon-day sun; the plants and flowers, everywhere studding the earth, spread beauty and fragrance, forming a new paradise. Who can look upon the beautiful landscape and not see the significance of Nature; every thing, from the smallest blade of grass to the loftiest tree of the forest speaks God's love to us; all of His works are made to minister to our happiness; the sweet-scented rose, the gently wafting breeze, even the unheeded leaf which lies neglected beneath our feet, all, exhibit God's love to us; from all Nature we may learn many moral lessons.

"The rose, after a fierce shower, bent down by the rain-drops, waits for the passing breeze to shake its branches and lighten the burden of depression, that it may once more stand upon its stem: So man, borne down by affliction, longs for a friend to lift him out of his sorrow, and to triumph over his misfortunes. The Sun does not shine for the *few* trees and flowers, but for all the wide world's joy and light and warmth.

"So, also, man is not placed on the earth for his own sole benefit, but with the evident design of promoting the welfare and happiness of his fellow creatures. He can approach perfection only in proportion to his fidelity to the sacred laws of nature; he can secure real happiness only in so far as he imitates those laws and makes his life a practical application of them."

"Happy the man, who, studying Nature's laws,  
Through known effects can trace the secret cause;  
Sees in each atom and each blade of grass,  
A power, a wisdom, he can ne'er surpass."

A READER.

*Media, Pa., 1877.*



*For the Maryland Farmer.*

### SWORD AND PLOW.

There are no visible signs of conflict between the sword and plow; yet while foreign powers are stirred to their center by the clamor of war, and their subjects are leaving the plow for the sword, our rural representatives are springing to the plow, and our farmers know they are the back-bone of the nation; and bread, the staff of life, must be the trophy of the plow.

When flour advances the farmers get an extra nod of recognition, and the merchants and tradesmen curry the favor of those who hold the plow.

Indeed, its something like getting an office, every body is patronizing, and when bread stuff is in great demand for foreign consumption, our farmers have their humble calling mightily dignified. Sheep raising too, becomes a popular industry. A protracted war will increase the demand for clothing, and it should make the farmers cry, more sheep and less dogs. This branch of industry is crippled in Maryland, because there are so many dogs; sheep can be dispensed with, but dirty useless curs, never!

Through the talent and energy of Mrs. Gen. Gates, the history of Mr. Alastair P. Gordon Cummins, one of England's sons, has become familiar throughout the country.

Being present at the Cummins-Eames wedding to make my own report, I saw this gentleman who has set the young men of this country a worthy example. He is the son of Sir Alexander Gordon Cummins of Gordonston, Scotland, and came from England in 1872; rented a farm in Maryland, and engaged in raising South Downs and fine Cotswolds. Being successful, this gentleman purchased a farm of 300 acres, and his fine Lincoln and Leicester shows have taken the prizes at two State Fairs in Maryland—one, the Kirk silver cup, from the noted Baltimore manufactory. Hundreds of young men who hang around our cities, would do well to imitate Mr. Cummins' example, rent farms and make themselves a name and a support.

BESSIE BEECH.

*Washington, May, 1877.*

**WHEAT, CORN, AND CLOVER.**—From Mr. Eichelberger, of Virginia, we have a clear and practical communication, in minute detail, on cultivating the above crops, too late for this month; it will appear next.

**DETERIORATION OF CROPS.**—We have received too late for publication in this issue, a very instructive article from Prof. Yeoman, on the above subject, which will be inserted next month.

**SOVEREIGNS OF INDUSTRY.**—This has become a useful and numerous organization, and a power among the Industrial classes. On June 25, the Sovereigns—at Washington, D. C.—to the number of about 400, enjoyed a delightful moonlight excursion down the Potomac River, on Brad Adam's splendid "Barge;" and they have our thanks for the courtesy of an invitation.

Accompanying this were several fine specimens of wheat in the stalk, which may be seen at this office.

### AGRICULTURAL COLLEGE.

COMMENCEMENT,—1877.

We have space, at this time, for only brief notes of this interesting occasion, the annual commencement exercises of the Maryland Agricultural College. There was much that was gratifying, and some things that we could wish had been different.

The Baccalaureate sermon was preached on Sunday June 25th, by Bishop Wm. Pinkney.

Discussions, examinations, awarding of medals, &c., Monday 25th.

On Tuesday 26, the regular commencement exercises took place in the College chapel, the platform was handsomely ornamented with cross-swords, shot guns and evergreens; while the walls along down the room bristled with muskets. Some thought that Emblems of Agriculture, such as the sickle, the plow, the sheaf &c., would have been more suitable decorations for an Agricultural College.

Rev. Mr Williams opened with prayer. President Parker announced the Graduates and handed them their diplomas. Prof. Warfield seemed to conduct the literary exercises. Addresses were delivered by the four graduates as follows:

By Scott Truxton, on "Let there be Light." E. G. Emack, on "The Sources of National Wealth." R. R. Beall, on "Idolatry;" and George Thomas, the Valedictory, from the text "Honor and Shame from no Condition Rise." The addresses were ably written and well delivered.

Gov. Carroll conferred the degree of B. S., and delivered the diplomas to the Graduates with appropriate remarks. The Oration was delivered by Hon. A. B. Hagner, a pleasant, flowery effort.

The degree of Master of Arts was conferred on T. C. Norwood, L. A. Griffith and H. M. Davis, of Maryland.

A band from Washington furnished the music. The Benediction was pronounced by Bishop Pinkney.

The College is now out of debt; and a look over the farm shows that Col. Jones, Prof. of Agriculture &c., has done a good deal of good work on the place. Mr J. C. Shipley has been appointed superintendant of farm work. Among those on the platform were Gen. Ammen, and S. T. McCullough. A Ball was enjoyed in the evening.

For the benefit of Maryland Agriculture we earnestly hope that this College may increase in efficiency and prosperity, until it shall become fully and eminently an Agricultural School; but we do not believe it will become fully such, unless the head of its management is a man thoroughly acquainted with, and heartily interested, in the operations and interests of Agriculture.



BALTIMORE MARKETS--July 1.

This Market Report is carefully made up every month, and farmers may rely upon its correctness.

Apples, New York, per bbl.	2 50	a3 50
do. country do.	2 50	a3 50
<b>Bark</b> —The market steady and unchanged, No. 1 \$25; No. 2 at \$12a20 per ton.		
Beans—Medium to choice.	2 20a2	50
Beeswax—Prices steady at.	0 25a0	30
Broom Corn—Medium to choice.	0 06a0	08
Butter—For table use.	0 18a0	30
“ Cooking and bakery.	0 10a0	15
“ Near by receipts.	0 16a0	25
Cheese—N. Y. State.	0 11a0	14
“ Western.	0 11a0	15
Cotton.—Demand is good.	0 10a0	12
Eggs—Different localities.	0 11a0	15
<b>Fertilizers</b> —Jobbing rates are here quoted. Contracts for large orders can be made at reduced figures. 2,000 lbs. to the ton.		
Peruvian Guano.	\$50 00a65	00
Turner's Excelsior.	\$50 00	00
do Ammonia Sup. Phos.	40 00	00
Soluble Pacific Guano.	45 00	00
Rasin's & Co.'s Sol. S. Is. Guano.	50 00	00
Excellenza Soluble Phosphate.	50 00	00
do Cotton Fertilizer.	50 00	00
John Bullock & Sons' Pure Ground Bone.	42 00	00
J. M. Rhodes & Co.'s Ammoniated Phosphate.	45 00	00
Poppeln's Silicated Phosphate of Lime.	50 00	00
Lorentz & Ritter's Star Tobacco Fertilizer.	55 00	00
do do do Ammoniated.	50 00	00
do do do Dissolved Bone.	50 00	00
R. J. Baker & Co.'s Ground Bone.	40 00a42	00
R. J. Baker & Co.'s Dissolved Raw Bone.	45 00	00
Zell's Ammon. Bone Super Phos.	45 00	00
Whitman's Phosphate.	45 00	00
Missouri Bone Meal.	40 00	00
Horner's Md. Super Phosphate.	50 00	00
do Bone Dust.	45 00	00
Dissolved Bones.	45 00	00
Moro Phillips' Super Phosphate of Lime.	48 00	00
Plaster.	per bbl.	1 75
Orchilla Guan A. per ton.	30 00	00
South Sea Guano.	50 00	00
Slingluff & Coa Dissolved Raw Bone.	45 00	00
Slingluff & 's Dissolved Bone Ash.	40 00a42	00
Whitman's Potato Phosphate.	45 00	00
“ Dissolved Missouri Bone.	45 00	00
“ “ Bone Ash.	40 00	00
Feathers—Live Geese.	0 40a0	45
Grain—Corn.	0 54a0	67
Oats.	0 40a0	48
Rye.	0 75a0	77
Wheat.	1 80a1	90
<b>Potatoes</b> —		
Early Rose, per bushel.	a	
Peerless, per bus.	1 50a1	55
Peach Blow, per bus.	1 65a1	70
Sweet Potatoes per bbl.	3 50a5	50
Live Stock—Beef Cattle.	0 05a0	06
Hogs, fat.	9 00a16	00
Sheep.	0 05a0	08
<b>Seeds</b> —Clover scarce and in demand.		
Clover Alsike.	\$ 10 60c	
do Lucerne best.	60c	
do Red, Choice.	14a16	
do White.	60c	
Flaxseed.	\$ bush. 1.30a1	40
Grass Red Top.	\$ bush. 1.00a1.50	
do Orchard.	2.50a3.25	
do Italian Rye.	3.50	
do Hungarian.	1.50a1.75	
do Timothy 45 lb.	2.15a2.15	
do Kentucky Blue.	2.25a2.50	
<b>Tobacco</b> —LEAF—		
Maryland—Frosted.	\$3 00a4	00
do. sound common.	4 00a7	50
do. good do.	7 00a7	50
do. middling.	9 00a12	00
do. good to fine red.	15 00a20	00
do. fancy.	12 00a17	00
Virginia—common and good lugs.	8 50a10	50
do. common to medium leaf.	9 00a13	00
do. fair to good.	13 00a16	00
<b>Wool</b> —For Tub-washed, 35a40 cents; unwashed, 25a40 cents per lb.		

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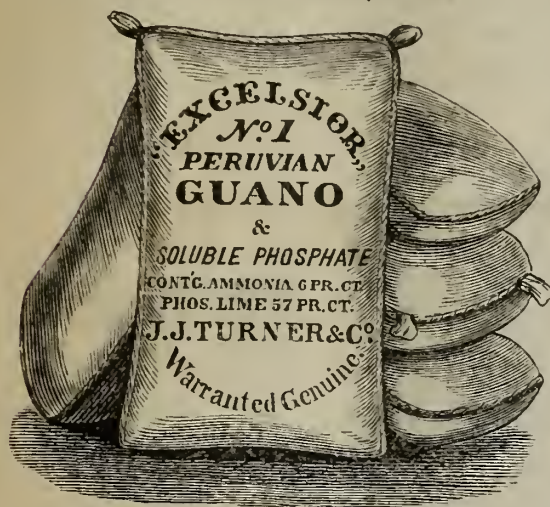
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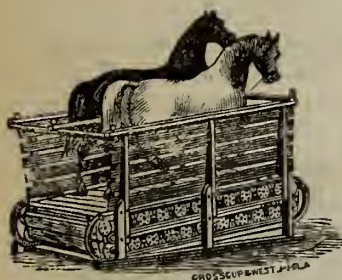
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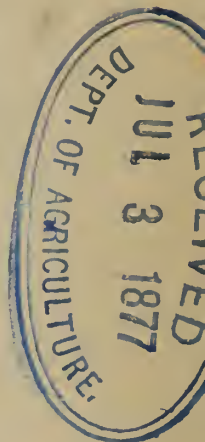
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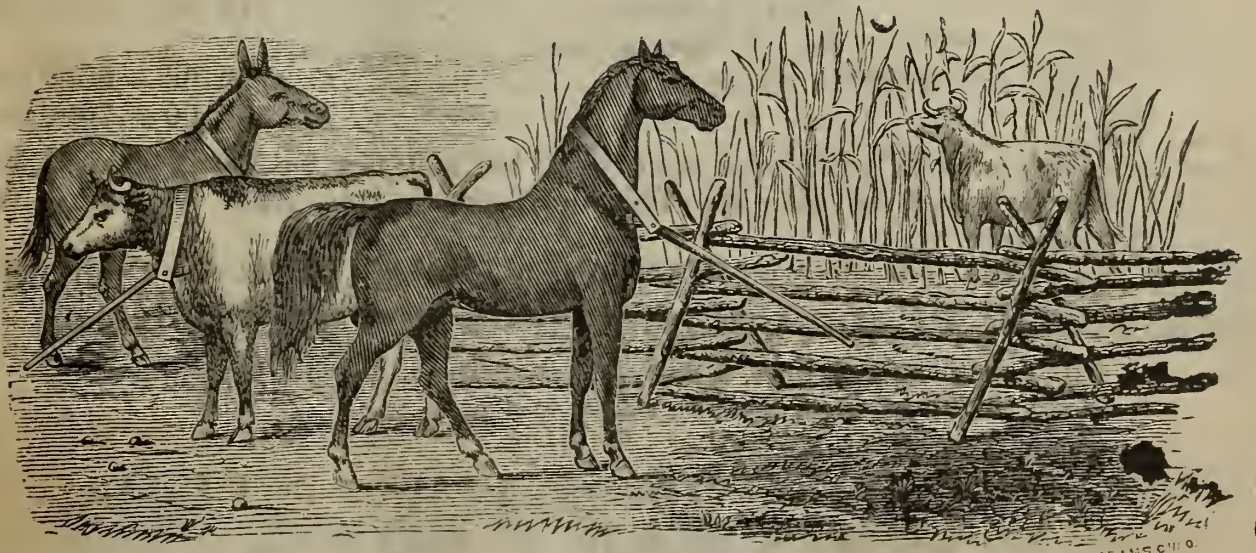
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
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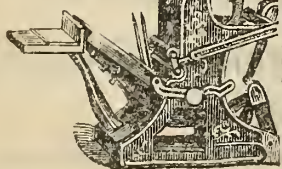
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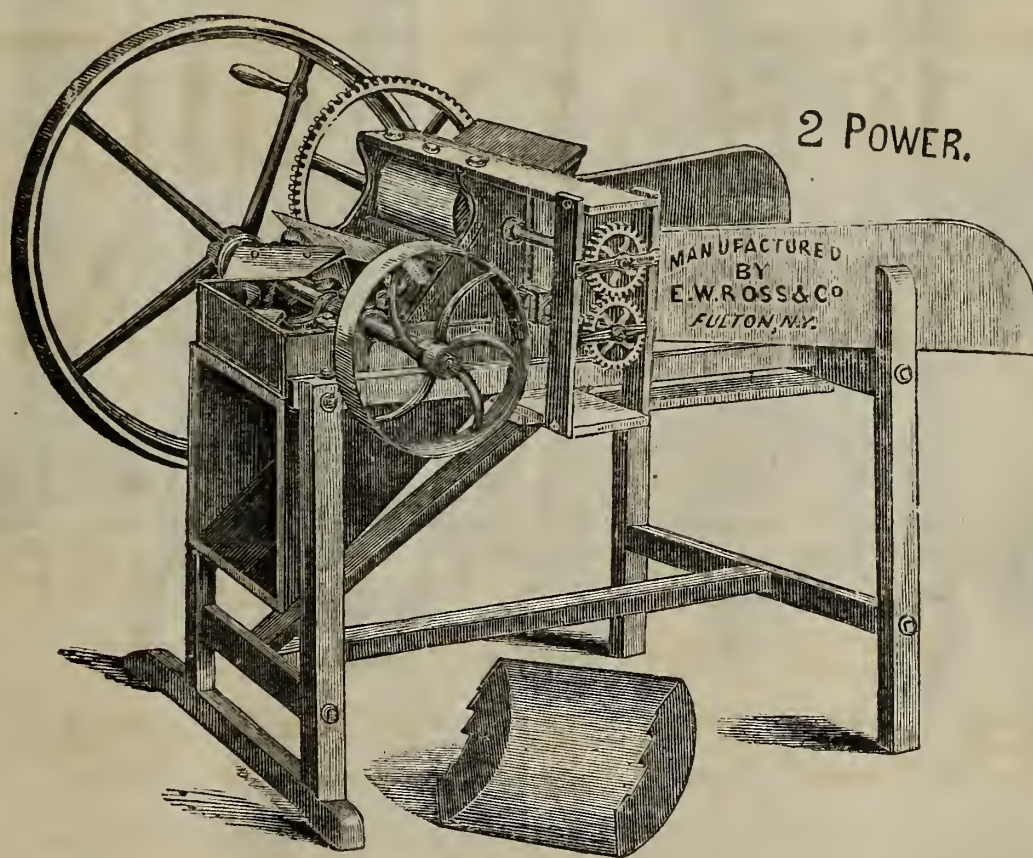
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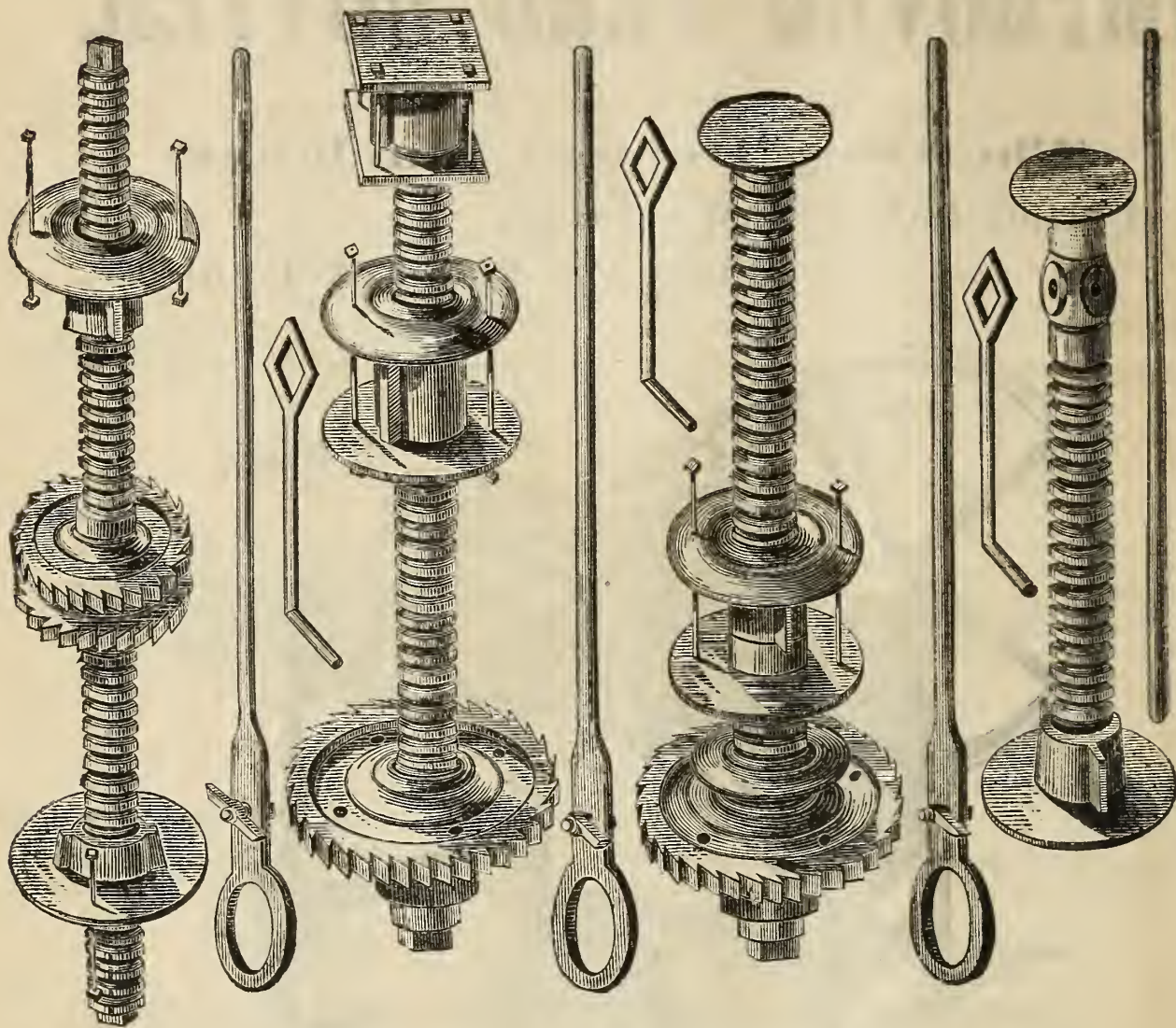
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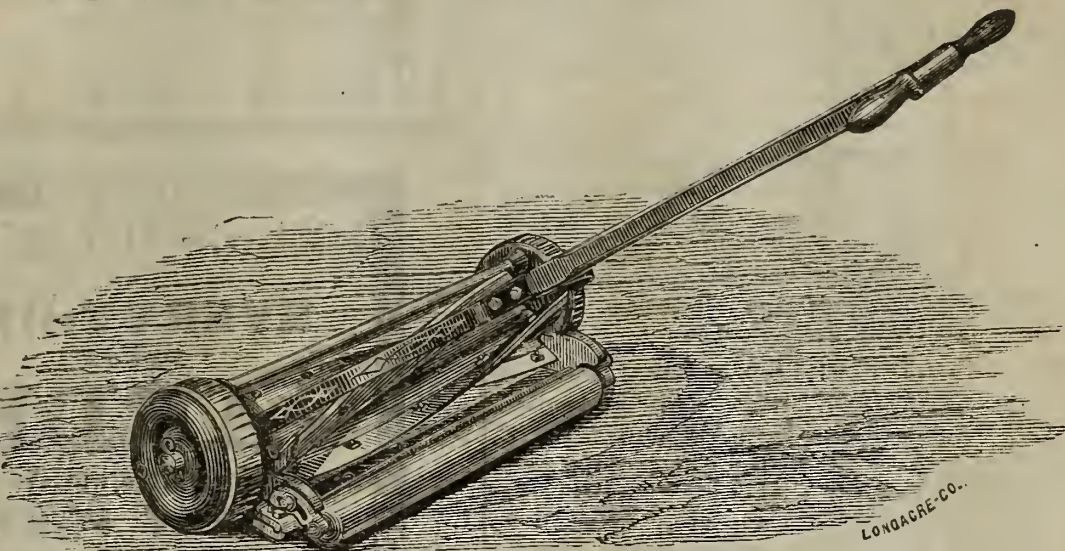
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12 "	6½ in. wheels,	A Lady,	31 "	18.00
14 "	"	A Youth,	37 "	20.00
16 "	"	One Man,	41 "	22.00
18 "	"	"	47 "	24.00
20 "	"	"	50 "	26.00
51 "	8½ inch "	"	51 "	22.00

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WIDTH.	STYLE.	POWER REQUIRED.	WEIGHT.	PRICE
30 inch,	With Draft Rod,	Light Horse,	315 lbs.	\$100.00
30 "	Shafts and Seat,	"	350 "	120.00
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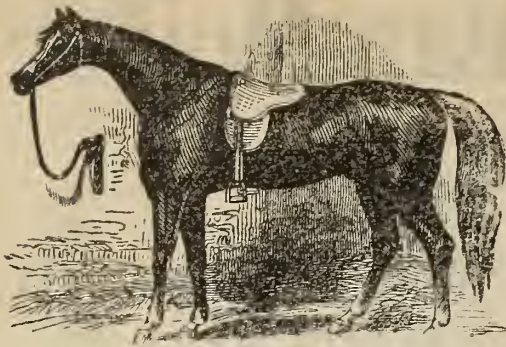
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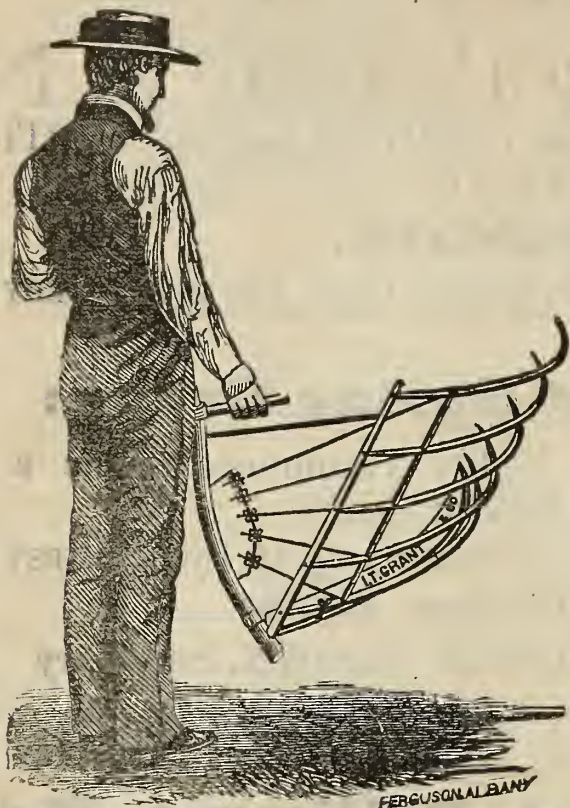


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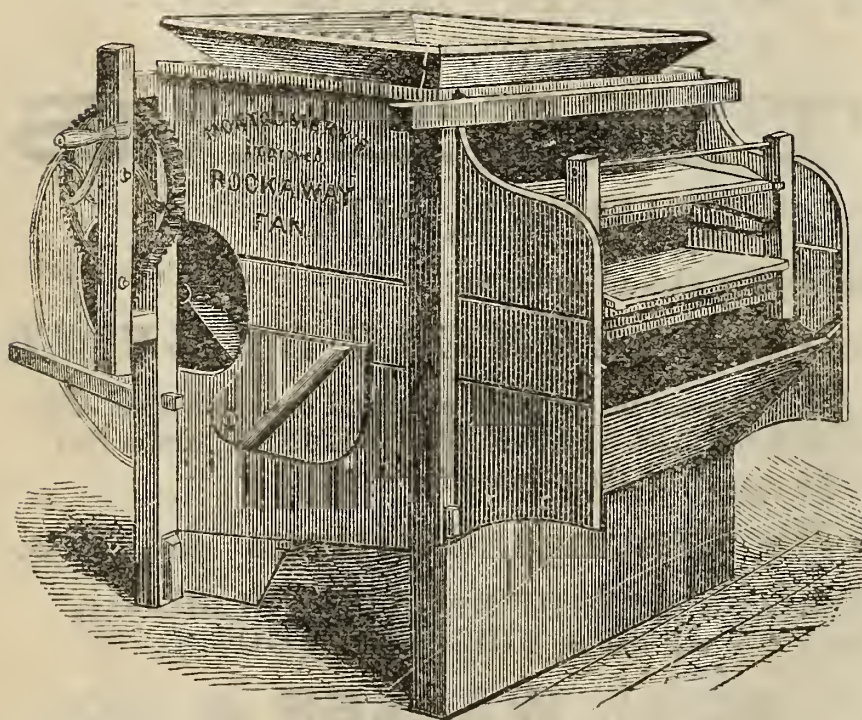


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
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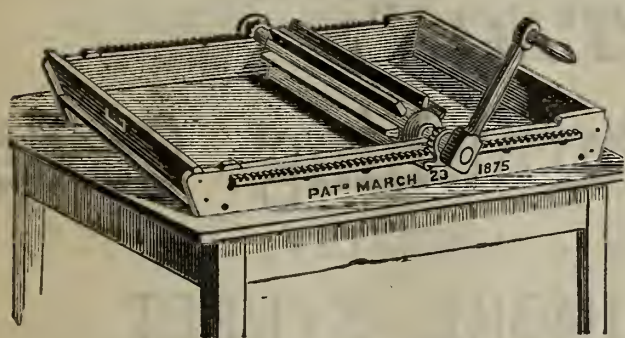


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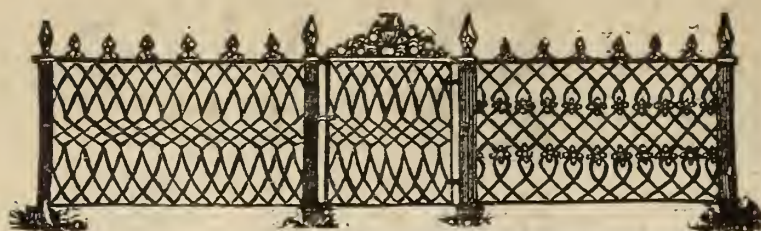
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